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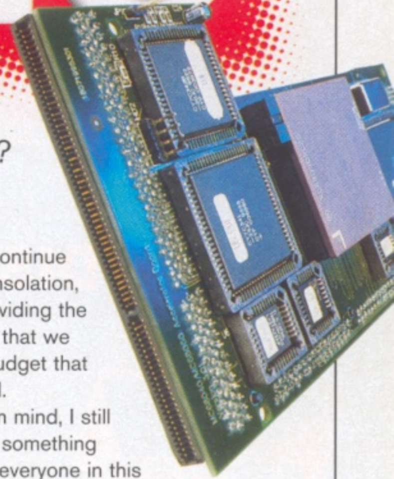
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Inside issue



What's happening to your favourite magazine? Read on to find out.

There's been a resurrection of the WWII spirit (no disrespect intended) in the AS offices this month, and we would occasionally burst out into choruses of "We shall overcome'. It can't have escaped your notice that we have been hit again, this time with more than just the loss of pages.

The loss of one of our Coverdisks is a big blow to all of us, but the distressing truth is that a lack of advertiser confidence is hurting all the Amiga titles.



Magazines can only survive if they are profitable and advertising revenue goes a long way to providing this, but with a diminishing market, advertising prices are being driven down and the magazines along with them.

The only solution for readers (unless you fancy taking out an advert), is to subscribe. Not only does it save you money on the issue, but it also means that you do get a second disk every month – the Subscribers' disk. It also gives us a more solid base to continue with. Small consolation, but we are providing the best magazine that we can with the budget that we are allowed.

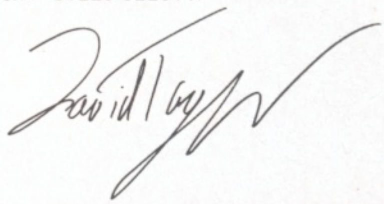
With that in mind, I still believe there's something worthwhile for everyone in this issue. There's one of our best Supertests to date, reviewing every accelerator we could find for the A1200. John Kennedy has been busy testing every board not only for its official MIPs rating, but also in real life tests, such as DTP and 3D. We've also got reviews of all the latest hardware and software available, including a preview of the new OctaMED Studio program - the eagerly awaited music package.

Elsewhere in the issue, our Amiga experts have been busy solving your problems and continuing our How to... feature. This month, there's additional information on AmigaGuide and a complete hardware project which shows you how to build and link up an Liquid Crystal Display to your Amiga, with the software drivers you need included on the Coverdisk.



Speaking of the Coverdisk, there might be only one, but it's one of best yet. There's an exclusive version of the top-rated Iconian 3, a WWW page creator and tonnes of excellent utilities, like the all-new AmiCDFS 2 – the most compatible filing system for CD-ROM users.

Add to this the tutorials – with the new AMOS column – and the best PD coverage and I'm sure you'll see that our content still has bags to offer. So turn over to see more about the issue and remember that to subscribe, all you need to do is call our hotline on ☎ 01225 822511.



Turn the page for the contents of issue **64**

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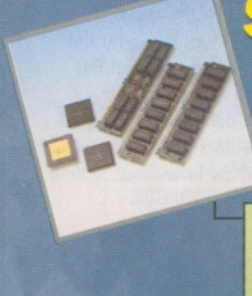
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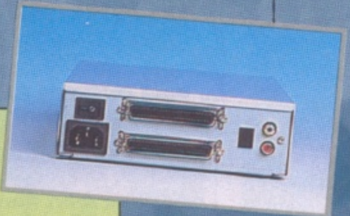
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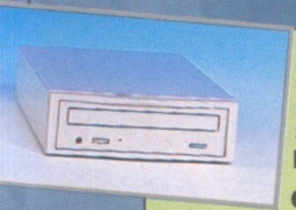
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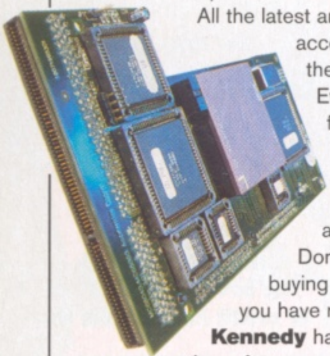
From the M62 Junction 17 head towards Bury. We are 50 yards on the right hand side after the third set of lights. The door to our premises is next to the florists opposite the Masons Pub.

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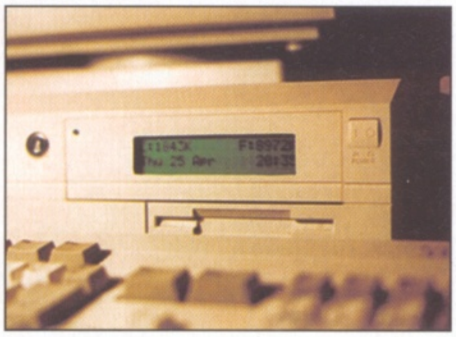
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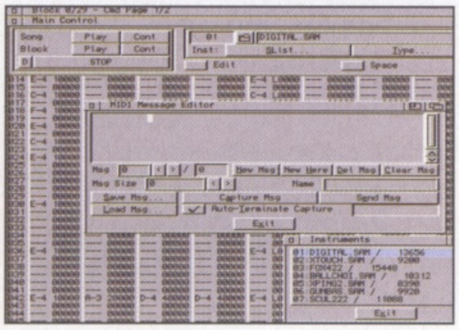


Nothing to do with music or erm, never mind. It's a ripping new drive anyway.



Turn to page 41 and build your own LCD. All the software you need is on the Coverdisk (page 8).

Shopper**Reviews**



We have seen the future of Amiga music and we bring you a preview of OctaMED Soundstudio.

Shopper**Tutorials**

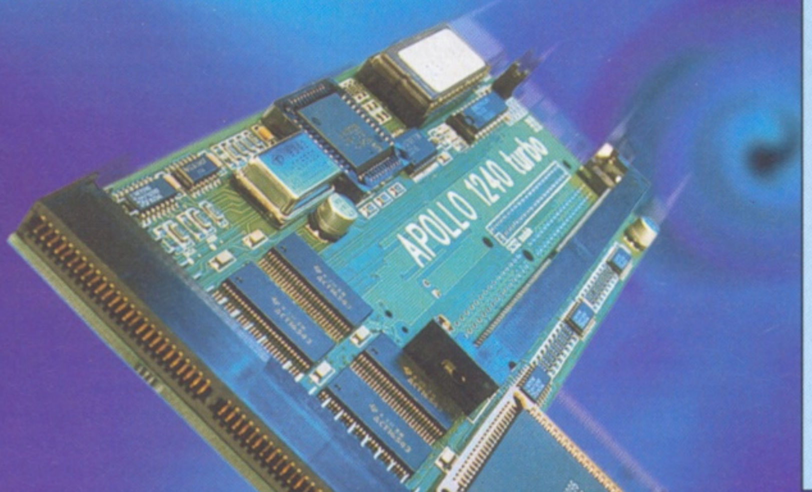
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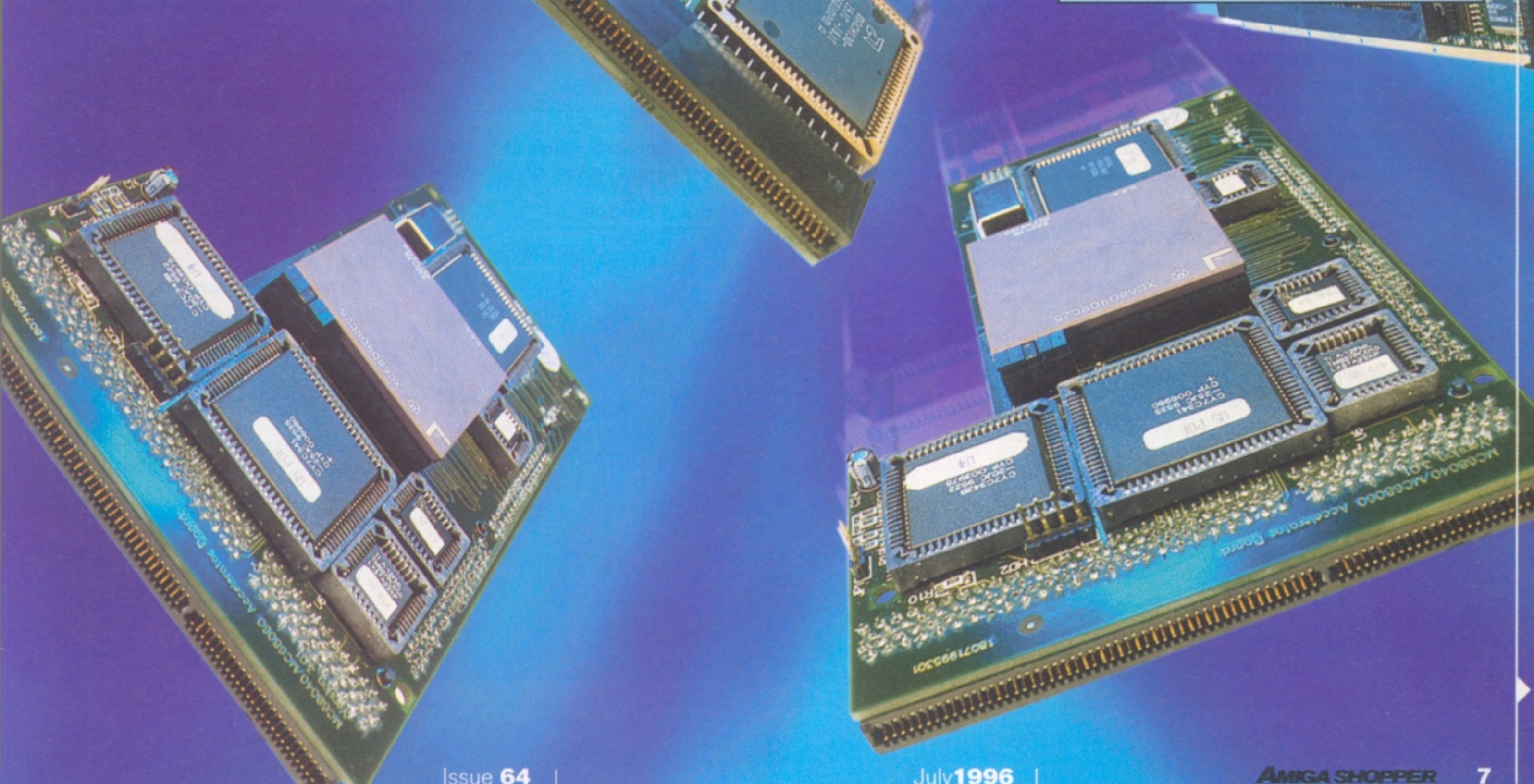
Shopper**Services**

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Page **16**

You want more speed and power? You can have it. We test and rate every accelerator available for the A1200.





Shopper**Disk**

Four disks packed onto a single floppy, with enough software to ensure there's something for you to get your teeth into.



Cover disk



We might be down to a single disk, but there's still nearly 3Mb and four disks packed onto here! **David Taylor** *introduces one of our finest disks of all times…*

Let's not dwell on the single Coverdisk issue here; instead let's take a look at the masses of useful programs packed on here. This month we've managed to track down some of the best new PD and Shareware programs and utilities that have been seen for quite some time. Very useful indeed.

ApplicationZone

Iconian 3

Author: Chad Randall

After getting in touch with Chad Randall, he graciously offered to create a special version of this brilliant package exclusively for Amiga Shopper readers. This version has the workspace limitations normally in the Shareware version removed so that you can work on large icons. However, this means that you must not redistribute this version under any circumstances. You should also note this



An exclusive version of the brilliant Iconian 3.

program's Shareware status and remember to register if you are going to use it.

As you can see from the pictures, Iconian has been given a massive overhaul. It now allows you to design your icons using a variety of different drawing tools and different pen densities. In addition to the creation of the visible part of the icon, you can also change all of its parameters, like Tooltypes, palettes, icon type (for example, disk, project, tool, drawer).

In fact, Iconian offers so many options, it's like a fully featured paint program for icons, except it offers many features that you wouldn't see in all but the most expensive packages.

After you've tried it out, you'll see why it makes the icon editor bundled with the Amiga look like a poor joke. Please note that after you have de-archived the Iconian package, you must install it using the Installation icon, because your system needs certain files adding to it. Iconian is WB3 only as it has been designed to take advantage of all the OS3 enhancements.

Web Maker 1.1

Author: Pascal Rullier

HTML is the language used to create World Wide Web pages. It controls all the codes, links and hooks, and so on. What do you do if you want to create a WWW page and don't know diddly squat about HTML? Well, you turn to this program! Web Maker is designed to take all the effort out of Web page creation.

It works through a GUI which starts out with the basic code for a page already included. All you need to do is load in your text to the

Iconian 3 and its features

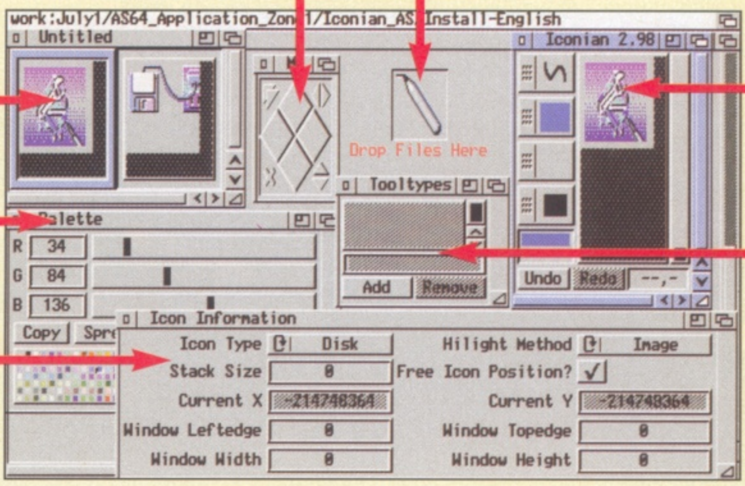
The move control allows you to scroll around larger icons that don't fit in the window.

Iconian 3 places an icon on Workbench that you can drop icons on to edit within the program.

The preview window shows both the unselected and selected icons.

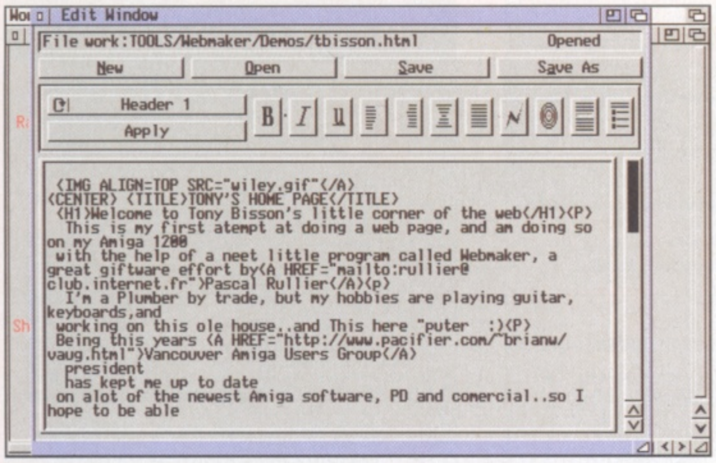
The palette requester can be used to adjust the colours used within your icons.

An information panel with a rolling requester for different parameters in your icons.



The main editing window with lots of tools accessed from the icons on the left.

Many icons require or make use of Tooltypes, so you can add those here.



WebMaker is a GUI driven World Wide Web creation program that enables you to make HTML documents with ease.



A small example of a Web page created using WebMaker. Include pictures, links and E-mail all at the click of a button.

appropriate places or type it in directly. Should you want to change the font or style, simply select it from the menu and the appropriate codes are entered. Adding links to other pages or other sites or E-mail address is easy. Again, just select it from the menus. The same is true of adding pictures.

If this makes it sound like you just need to know how to type in order to create a WWW page, that's because it's true. Included in the package is a small HTML viewer, which can be found in the Contribs directory. When you've finished your page, load it up using this to see how it looks. You'll be amazed how quickly you can now create HTML documents. Web Maker requires WB3 and MUI 3.1 to run.

Disk contributions

This month's disks were compiled using files from Aminet and from Walton's Mountain BBS (☎ 0181 891 5730), and with the help of the authors of the programs.

If you would like to contribute to a future disk, whether you have a full application, utility, 40K demo, clipart, font, 3D object, or even a module, send it to:
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Please only send the minimum distribution archive. Also, please do not powerpack (or similar) any files because it detracts from the archiving.

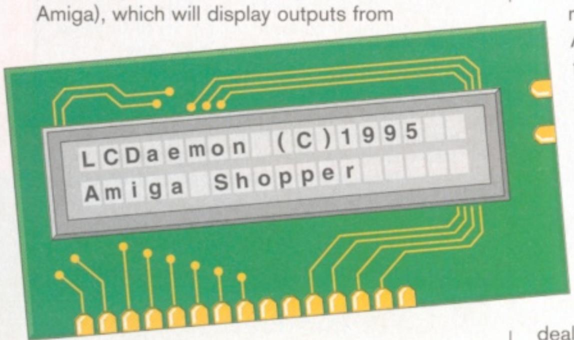
Technical**Zone**

This month we have amalgamated the Technical and Utility Zones. Many programs are difficult to define, so we've given up trying. The programs here should be of use to most users, but may include aspects that are more geared to experienced Amiga owners.

LCD Daemon

Author: Hendrik De Vloed

This month we're very honoured to be able to present you with a complete DIY hardware package together with the accompanying software to drive it. This package enables you to build a Liquid Crystal Display that is linked to your Amiga (or built into it if you have a box Amiga), which will display outputs from your computer. There is the ability to send it text so that it can either respond to any pre-defined action with a pre-defined response, or you can use it to display reports sent out by programs, or you can use it as a status indicator – for example, "Booting up", which is just a variant on the first option.



The software for this month's DIY project to build an LCD is included. (See page 41 for DIY.)

The documents explain the actual building of the hardware and use of software. Hendrik has also written a brief explanation for Amiga Shopper readers which can be found in our How to... series this month, on page 41.

AmiCDFS 2.14

Author: Martin Berndt

AmiCDFS is a very popular file system for Amiga CD-ROM users and it has now been completely re-written to be "the fastest and most compatible CD-ROM filesystem for the Amiga." Add to this the fact that it allows you to read Mac disks with compatible disk drives, and you can see why it's the one John Kennedy recommended in our Amiga Answer's last issue.

Martin has re-written the code from the original AmiCDFS written by Frank Munkert. It's now faster than ever and offers support of hybrid CDs as well as handling audio CDs (there's the excellent MCD audio CD player included). It can deal with normal ISO 9660 single and multi-session CDs, Rockridge Interchange Protocol and Macintosh HFS discs.

It has been tested with IDE/ATAPI, PCMCIA and SCSI drives and there's even a version optimised for 68030 machines. Given all the work that Martin has put in, please respect the Shareware status and register. The details are given in the documentation.

DeepX

Author: Adam Ciarcinski

The speed at which a hard drive becomes full is frightening. Even large (1Gb) drives can soon become stuffed with programs that you are loathe to delete. Before you decide that the only solution is to ditch your drive and fork out for a new, bigger one, you could make use of a disk expander. Disk expanders transparently intercept read/writes to a drive and pack files and programs so that all you notice is a slight pause while a program loads or a file is unpacked.

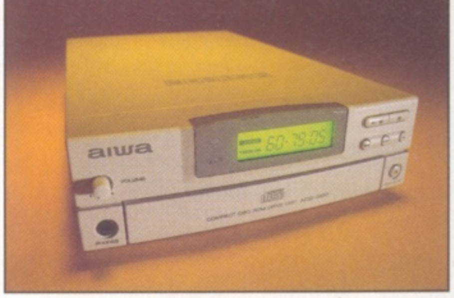
DeepX is one such "on-the-fly" expander that makes use of one of the best compression systems around – the xpk libraries. In order to use this expander, you need to have xpk installed, together with some of the numerous packers. Different packers are available for different types of files: some are excellent at dealing with sound samples, while others are ideal for executables. The interface then offers you the choice of which files to pack and which packer should be used so that you can choose one that best suits your needs.

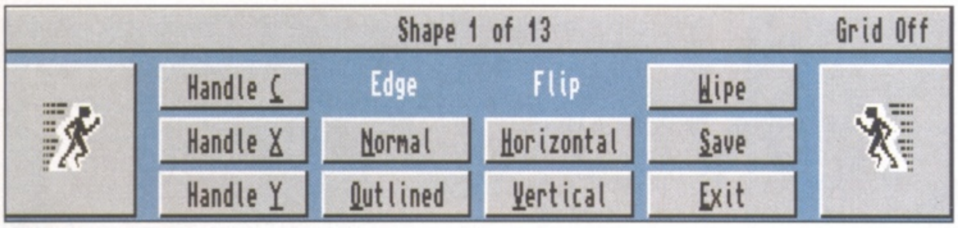
PC 2 Amiga 3.32

Author: Michael Kara

With more and more users possessing both an Amiga and an IBM PC compatible, the desire to transfer files between the two platforms is on

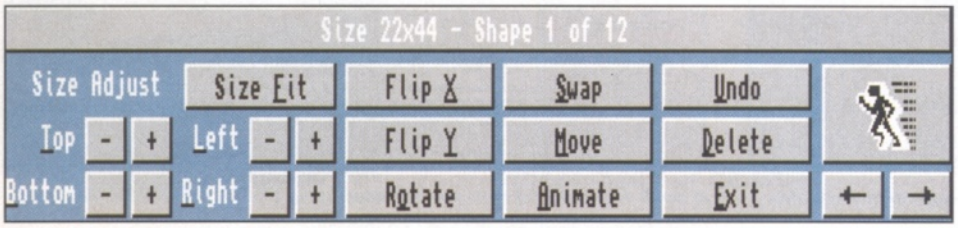
AmiCDFS 2.14 is the fastest and most compatible CD filesystem for your Amiga.





Above: Blitz Shapes Manager is an excellent tool which programmers can use to edit shapes.

Below: In BSM's Edit Mode, you can alter, and even animate, your shape.



the increase. The enormous interest that has been shown in Hi-Q's Siamese System and the amazing response to our Siamese competition (whose winner will be declared as soon as the Surfin' Squirel is available) confirm this. While no software can offer the power and flexibility of that commercial hardware and software solution, you could always transfer files using a simple serial link and a Comms package.

PC 2 Amiga radically improves this solution, by setting up a link where the PC serves as a slave to the Amiga, and the Amiga can access its files directly using CrossDOS as though it were a volume mounted for the Amiga.

ProgrammingZone

Those of you who have kept Royal Mail in business by writing to ask us to continue an AMOS column can stop now. AMOS is back with a brand new column taking you through the creation of a program. The code, which is supplied here, has been written by AMOS guru Malcolm Lavery and the tutorial itself has been written by our AMOS columnist Steve Bye. You can check out the tutorial on page 53.

Also on the tutorial front, we've got the code that accompanies this month's HiSoft BASIC tutorial, which can be found on page 48.

Blitz Shapes Manager

Author: John Cassar

This is a utility for use by Blitz BASIC programmers. It allows the user to grab, paste and edit shapes. No function is given for creating drawings of shapes. This is best done using one of the many drawing packages, such as DPaint or Brilliance.

Once your shapes are drawn, they are saved as an IFF screen. These screens are later loaded into this program and the shapes objects grabbed either manually or automatically. Having grabbed your objects, you enter the Edit Mode where you can cut, paste, flip, rotate, trim and even animate your objects which are then saved ready to be used in your Blitz programs.

InformationZone

This Zone goes from strength to strength, containing, as it does, the guides and text files that hold all the information about PD Houses and User Groups. As usual, the guides have been updated with new entries and amendments and can be viewed easily by double-clicking on them. If you don't have the appropriate text viewer, then you can load the text versions into a normal word processor. ■

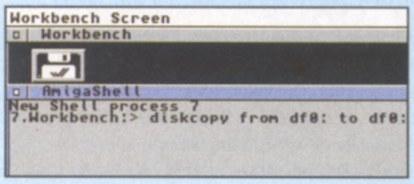
Beginners, look!



Before using either of this month's Coverdisks, please be sure to back them up – just in case. Simply follow the easy instructions below.



1 *Boot up from your Workbench disk or partition, double-click on your Shell icon – to be found in your System Drawer.*



2 *If you only have one disk drive, type in the following line and then press Return.*

```
Diskcopy from DF0: to DF0:
```

If you have two drives, place the Coverdisk in DF0: and a blank in DF1:, then type in this line instead:

```
Diskcopy from DF0: to DF1:
```

3 *Follow the on-screen prompts and remember that the Coverdisk is the source disk and the blank is the destination.*

4 *If you used the two-drive method, remember to rename the copy by clicking on its icon and pressing right-Amiga r.*

5 *If you have two drives, you can also copy the disk from Workbench by dragging the Coverdisk icon over the destination disk's.*

6 *Then place either of the Coverdisks in DF0: and reset the Amiga to boot it. It is best to boot disk 1 (or the Subs disk if you're a subscriber). This will let you install all the disks to either floppy or hard drive.*

Subscribers disk

If you're downhearted about the loss of one of our Coverdisks, then you'll be glad to know that there is still a way of getting two disks with AS. Subscribers receive an extra, exclusive disk absolutely free. Being a subscriber saves you money on each issue of AS as well – offering you exclusive money saving offers on products and the right to discounts on our mail order.

It also gives AS a sounder reader base with which to continue. So if you want to see your favourite mag survive and do yourself a favour at the same time, then subscription is the answer.

This month's Subs disk contains some excellent utilities, including the flexible Tiny Meter, an Imagine object path editor, more Blitz code and some programming utilities, Assign List manager, UnZip 512x, 3D objects for Imagine and Lightwave and another half a dozen utilities. Oh, and a rather snazzy picture that would have won our Amiga Answers competition this month, if we'd had the room to have one, that is. (Stifle sniffle.)



Don't delay, call our **Subscription Hotline** on ☎ **01225 822511** for details.

Dodgy disk?

To avoid errors when installing to floppies, ensure that your destination disks are of high quality. If an error occurs, try re-booting and using a different spare disk – the majority of errors are caused by faulty destination disks.

If your Coverdisk absolutely refuses to work and you are certain it is faulty, please return it, along with an S.A.E., to the address below. Please do not send faulty disks to the Amiga Shopper offices.

Amiga Shopper Coverdisk
(insert the name of the disk),
TIB plc, TIB House,
11 Edward Street,
Bradford
BD4 7BH.



we also won best supporting role

And the winner is... you.

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SAMSUNG

News

The latest information about VIScorp and its plans for the Amiga; new hard drives; Photogenics 2 on floppy; books for beginners and more...

What is VIScorp's vision for the Amiga?

Following the announcement last month that Amiga Technologies is to be bought by American-based interactive TV developers, VIScorp, we bring you all the details and decisions that have been made.

Although the deal is not yet signed and sealed, it is anticipated that there will be no problems and Amiga Technologies expect to announce the completion of the buy-out at a press conference planned for the end of May.

The day after the initial announcement on 12th April, Amiga Technologies' MD, Petro Tyschtschenko, gave a speech at a press conference at the World of Amiga Show in London, outlining the reasons for acquisition. This is what he had to say:

"In 1995, when Escom took over Commodore, Escom was in good shape financially. 1994 had been excellent and the corporate policy was set to expansion. A multimedia company was formed and Escom saved the Amiga.

"Amiga Technologies was founded and Amigas were brought back to a demanding market. Strategic decisions were taken to ensure the venue of new technology based models as soon as possible. We have achieved all this, but it was clear from the beginning that it would take some time for a financial break-even point to be reached. The company was created in May 1995, but could only begin with sales in mid-September. We have sold 40,000 A1200s, 13,000 monitors and 2,000 A4000T machines worldwide until now, which is a satisfying result.

"But Escom is now facing financial difficulties – a bad Christmas season and inventory write-offs being the main reasons for this. Escom currently does not have the financial resources needed to support the still ongoing costs of Amiga Technologies' advertising and research & development.

"To continue a successful Amiga business, a solution to this situation had to be found and VIScorp is it.

"In December last year, a license agreement was signed between Amiga Technologies and VIScorp, for the Amiga set-top box. This product is network oriented and needs a system like the Amiga with its video abilities and tight operating system. The relationship between Amiga Technologies and VIScorp, built up from this time on, became closer and closer.

"VIScorp is primarily a research and development company. Their research efforts are based on the Amiga technology for use in set top boxes. Former Commodore engineers work for VIScorp, which will be an appreciable synergy for the development of the Amiga in general.

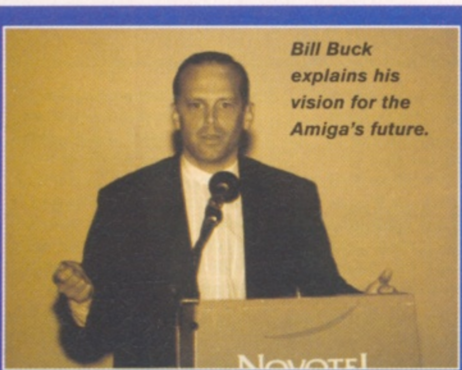
"The set-top box market is huge and will be a fantastic engine for our activities. This procedure is not affecting our daily business and ongoing projects – we want the migration to be made as smooth and transparent as possible, for our company and also for our business partners and the Amiga community.

"I am confident that this is a good chance for us to be successful in the future. When this deal will be finalised, the Amiga technology will return to an American company, which understands our technology and its manufacturing."



Bill Buck gives Petro Tyschtschenko a pat on the back.

Once Petro had finished, it was the turn of Bill Buck, VIScorp's Chief Executive Officer, who gave a speech loaded with enthusiasm although a little low on content. Not surprising perhaps, since the deal was still being negotiated and no time had been available to determine concrete plans. He did go on to answer questions from the press, assuring them of the Amiga's continued development. Perhaps most significantly, he told Amiga Shopper that



Bill Buck explains his vision for the Amiga's future.

"We are all Amiga lovers here."

Carl Sassenrath, Director of Software, VIScorp

Press conference latest

Only minutes before we went to press, we finally got confirmation of the delayed press conference date. It will have been held (by the time you read this) on the 19th May in Toulouse, France. Suggestions for the discussion will have been submitted by those in attendance so that all questions can be answered. VIScorp, represented by Bill Buck, Carl Sassenrath and Raquel Velasco amongst others, will introduce their set-top box at the same time. It will be the first time that developers and the Amiga community will have been consulted about plans for the machine and its new owners obviously hope this will help them build a successful strategy.

Rest assured, we'll have been there so we can bring you a full report on the outcome in the next issue.

The low-down on VIScorp

Visual Information Service Corp: Founded in 1990, the company's mission is "to be a world leader in providing easy-to-use and affordable technologies and services that permit the average television viewer to take advantage of the Internet, World Wide Web, on-line services, and interactive television (iTV). "

VIScorp's main concern is the iTV set-top device, ED (Electronic Device), which will use existing technologies of television and telephone to provide most of the web functions of a PC. By the end of this year, VIScorp aim to have launched the first EDs, as well as other peripherals.

The people behind VIScorp

Carl Sassenrath, Director of Software
An ex-Commodore man (Manager of Operating Systems), Carl is well known for his work on the Amiga's OS and he helped develop the CDTV for which he created the CDXL motion video format.

Commenting on VIScorp's imminent ownership of the Amiga, he says: "I have been telling people not to worry. We are all Amiga lovers here. Unlike Escom or even Commodore, VIScorp does not have a single IBM PC person in the group. We are all solid Amigans from the very beginning. I don't plan on killing the Amiga. In fact, if they ask me to take over system development, you'll see one killer Amiga!"

William H. Buck, Chief Executive Officer
With a military background – serving as captain in the US Military Academy, West Point, from 1977-1987 – William has plenty of skills in the team leading field.

With a long record of senior positions in interactive television and investment banking, with companies such as CBS, NTN Communications, ICTV Inc, US Wests Interactive Enterprises and the Times Mirror Company.

Roger Remillard, Founder, Inventor and Member, Board of Directors
One of the founders of VIScorp Roger is the inventor of the Electronic Device (ED) interactive television appliance.

He has been awarded several patents in the field of iTV which he has assigned to VIScorp. Previously he worked in research and development specialising in the field of two-way, rapid cellular telephony and data-radio communications.

Jim Goodnow II, Senior Software Engineer
Jim has a long string of applications he has written, including Aztec C – a complete C language development system for the 6502, 80X86, and 680X0 processors which was the first third party C development system for the Amiga, and Rez – a utility which allows applications on the Amiga to remain resident in memory for faster execution times and allows multiple executions to share code and save memory.

Don Gilbreath, Vice President of Engineering
Another ex-Commodore man, during his 11 years with the company Don played a major role in designing CDTV. He also developed a 1200 baud modem, a 3.5-inch floppy disk drive and RGB video card/RAM expansion, among many other achievements.

Curtiz J. Gangi, Chief Operating Officer
A former member of the Chicago Board of Trade, Curtis was part of the launch team for Commodore's CDTV, responsible for world-wide titles sales efforts. He was also a Director for Cinemaware, responsible for the introduction of the first successful CD-ROM title, Defender of the Crown.

VIScorp's interactive TV would incorporate the Amiga OS and be capable of running the wide range of Amiga software.

There was, to his mind, no sense in denying users the advantages of the Amiga computer. Although you shouldn't base a supposition of future plans on an off-the-cuff response, it would seem that VIScorp recognise that the Amiga per se is not succeeding in re-gaining its market using the current models.

The iTV device could be sold to millions of homes as such, with the user finding out about its actual computing abilities as secondary importance. This was the aim with the ill-fated CD³² games console, but an interactive TV could do the job much better, taking the Amiga into more homes than ever before. This would not mean a desertion of the Amiga as a standalone product, which is a separate project, but it would be an important evolutionary step to secure its future. Steve Kreckman's words (see below) seem to echo this sentiment.

Keeping promises

The main question on everyone's minds has got to be 'Will VIScorp keep those promises made by Amiga Technologies concerning research and development of the Walker and Power Amigas expected in early 1997?'

Steve Kreckman, Vice President of Hardware Engineering for VIScorp, commented: "We are not just another faceless corporate entity looking to disembowel companies for a profit. The principal people (myself included) involved in VIScorp are ex-Commodore folk, both managers and engineers. We're the same group who brought you CDTV.

"We have no plans for scrapping any projects in the works. We're not out to radically alter or gut Amiga Technologies. We need to keep our developer happy and thriving.

"Believe it or not, there are people in charge of the Amiga that actually care about the technology. One of the main reasons we considered what some might call a 'dead' platform for our set-top applications is that there is still a huge, loyal developer base on tap. We plan on making the best use of available applications and talent.

"Our set-top boxes are architecturally similar to the current Amiga products, so anything we do to promote the current Amiga lines only helps us in the long run. We intend to continue production of existing models and we will consider the development of new machines.

"Any improvements to the chipsets that we make can and will be applied to all the product line. We want to keep the Amiga architecture intact, not take it in a radically new direction. If we change the architecture, we break a lot of existing software and that's like shooting ourselves in the foot.

"We will grow the computer side of the business along with our own set top boxes.

"Our primary purpose for wanting to acquire the technology is to support it properly, improve the chipsets, and apply the technology in new markets. Things that the old C never wanted to do. The Amiga architecture is the key to our own products and we wanted to insure its future.

"We like the Amiga and intend to keep up production of the current models. The vision isn't dead, it's being reborn."

> **"The vision** isn't dead, it's being reborn."
>
> **Steve Kreckman, Vice President, VIScorp**



Petro spills the beans at the World of Amiga.

How to contact VIScorp

Anyone wishing to find out ongoing details of VIScorp's plans should contact their Web site at http://www.vistv.com

Refreshing attitudes

So, the Amiga is to have yet another master, but the enthusiasm of the new company for the platform is a refreshing change of attitude. The question remains as to what they will achieve, but in their favour VIScorp have definitely been more responsive and pro-active than Escom. Over the past month, they have been racing around the world negotiating. Deals with software developers are in the pipeline. Optonica, for one, were cited by Bill Buck at the press conference, somewhat to the surprise of Optonica's Carl Gamble as he is tied by a non-disclosure agreement. Any talk of the show with Carl has been restricted to discussing the frightening quantities of alcohol consumed, when you can tell he is really itching to give you details of the deals.

Still, some things have definitely been progressing as can be seen from AT's appointment of a parts distributor in the UK. Hawkes Technologies Limited (HTL) are now stocking a full range of parts for the Amiga and will be able to supply local retailers with any parts they need. HTL are available on ☎ 0181-5741581 or Fax: 0181-5741595.

We cannot know yet what the future holds for our favourite machine, but at least there now seem to be some people in charge who know what the Amiga is and what it can do.

Titbits

Upgrade offers

A1200 owners looking to upgrade to a much bigger, faster machine are being offered £200 as a trade-in against the A4000T. A500 owners have not been forgotten, either, with £100 trade-in offered for their machines.

Blittersoft, in Milton Keynes, have also reduced the price of the A4000T to £1999.95. It is the 040 version, complete with 1Gb drive, 2Mb Chip, 4Mb Fast RAM and full software packages.

For more details on this, and other offers, call Blittersoft on ☎ 01908 261466.

Get the picture?

If you're into graphics, then you must be at least a little frustrated by the standard monitor that comes with your Amiga. But all that can change with the DblScan 4000, distributed in the UK by Blittersoft.

It's designed to upgrade the A4000's PAL/NTSC screenmodes in a way that regular VGA/SVGA/multisync monitors are able to show them, and is completely compatible with all Amiga programs.

You can only use DblScan 4000 if your Amiga has a video slot. Once fitted in the video slot, a standard VGA connector is used for the RGB port and, if a graphics card with a pass-through option for Amiga output is being used, for example, Picasso II, you can connect this straight to the DblScan output.

Priced at £149.95, call Blittersoft on ☎ 01908 261466.

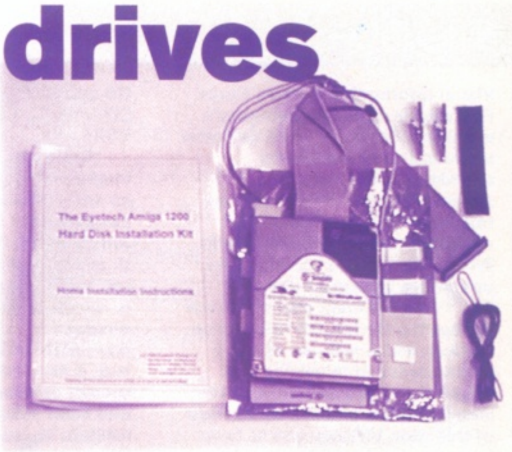
Photogenics on floppy

Since we announced last month that a new version of the popular Photogenics package was to be launched on CD-ROM, its makers, Almathera, have confirmed that they will also be producing a floppy disk version.

It will cost the same as the CD-ROM version – £99.95 (or £59.95 upgrading from the Lite version and £44.95 from Photogenics versions 1.0 to 1.2a).

For more details on Photogenics 2, call Almathera on ☎ 0181-687 0040.

Easy hard drives



Hanker after a hard drive, but worried about losing your Amiga's warranty if you open up its case? Eyetech are selling an InstantDrive package which can be installed into A600s and A1200s without case modification or hole drilling – just pop it into your Amiga.

Available with either 1.1 or 1.3 Gb AV drives (£219.95 and £249.95, respectively), the InstantDrive kit comes with antistatic protection for the installer and a 36-page manual of pictorial instructions. Eyetech reckon the manual is so clear and easy to follow that even a complete novice could install one (it took only three minutes for one of their team to install a hard drive on an A1200!), but that doesn't mean they're low-end drives.

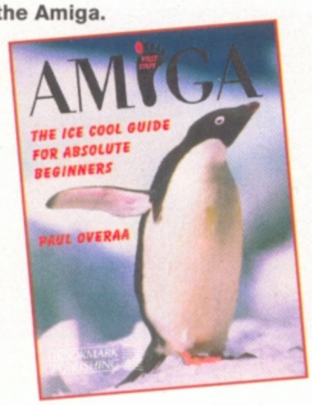
The drives have Workbench 3 pre-installed, 45 PD/shareware utilities installed and configured and a fully licensed copy of Optonica's MMExperience software (multimedia authoring package) pre-installed.

Installing any hard drive involves breaking the seal on your Amiga's case which may have implications on your warranty. But Eyetech's MD, Alan Redhouse, says: "In law the manufacturer/retailer has a statutory duty to correct defects of manufacture or failures through normal use within 12 months of purchase. It is strictly down to them to prove if any failure has been brought about by unauthorised modifications. In practice, engineers will interpret this by whether the modifications have been carried out professionally or have been 'bodged'. As the InstantDrive package does not involve any modifications to the Amiga, it will not result in any warranty being voided if fitted in accordance with the instructions supplied." You just need to connect it correctly.

For more information on the InstantDrive, contact Eyetech on ☎ 01642 713185.

Beginners start here...

If the words Workbench, Shell and windows are double-Dutch to you, and you can't get to grips with ordinary manuals or instructions, a real beginners book is what you need to get you taking your first steps using the Amiga.



And that's exactly what a new book by Amiga Shopper's regular contributor, Paul Overaa is called. First Steps Amiga covers all the essential things a beginner needs to know and because no prior computer knowledge is presumed, it presents them in a way which is easy to understand.

Priced at £6.99 it is published by Bookmark Publishing, ☎ 01525 713671.

...or over here!

With the Internet being the 'thing' at the moment, Bookmark also reckon that Amiga owners should be helped to get in on the act.



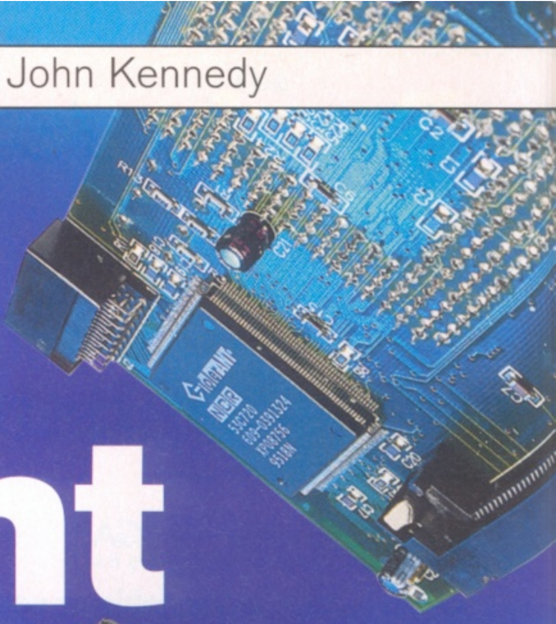
First Steps Amiga Surfin' takes you through the basics of the necessary hardware and software and explains how to install and configure them to your Amiga. Written by Karl Jeacle, it costs just £6.99 from Bookmark Publishing who are available on ☎ 01525 713671.

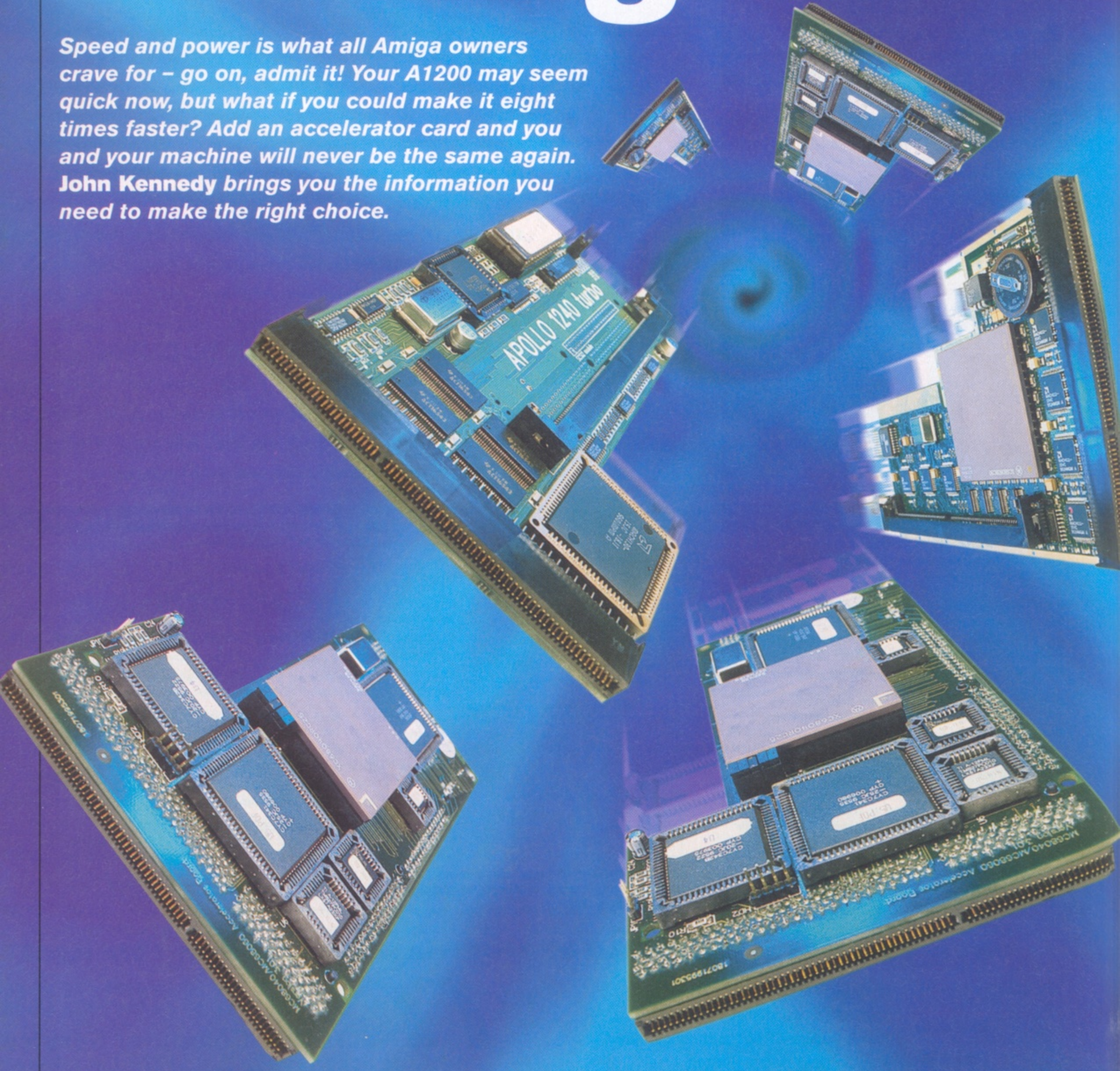
Epic Encyclopedia

Epic Marketing have released a new interactive encyclopedia on CD-ROM. An AGA title with film clips and sound samples as well as images and up-to-date information, it is available for £29.99, ☎ 01793 490988.

Faster than light

Speed and power is what all Amiga owners crave for – go on, admit it! Your A1200 may seem quick now, but what if you could make it eight times faster? Add an accelerator card and you and your machine will never be the same again. John Kennedy *brings you the information you need to make the right choice.*





In the corner of my office sits my very first A500. When I first bought my machine, it was a very fast system and I was the envy of many of my friends. Now, of course, the A1200 has an faster 68020 fitted as standard and my friends have other things to worry about (like hair loss).

The moral of the tale is that despite what you might think, the native Amiga 1200 is actually quite a fast computer, helped out with an efficient operating system and a set of very capable custom chips for handling sound and graphics. It can run a lot of software right out of the box, and many users are happy and find they don't need to spend any more money on it.

Of course, techno freaks like you and I know different. We know that on an expanded A1200 there are problems as the custom chips need to share the same memory as the CPU. The result is a reduction in performance.

Faster Memory

The easiest way to speed up the A1200 is to add some extra memory to the trapdoor. This is called 'Fast memory' because it is only used by the CPU, and not the custom chips. Adding extra memory like this usually instantly doubles the speed of an A1200, and makes it a lot easier and more enjoyable to use.

Adding a faster processor is another way to improve performance, and there are many third party cards to choose from. Some use a faster version of the existing processor, and others use different members of the Motorola family. The A1200 has a 68020 as standard, but many cards replace this with a 68030, 68040 or 68060 (there was no 68050).

All these CPUs are compatible, but use different hardware designs to run faster and are available in different speeds. The 68040 and 68060 have a floating point processor built in, with the other processors it takes the form of an optional separate chip. The 68030 and above is also available with an integral MMU, which is useful for some virtual memory tricks and debugging utilities.

With enough spare cash, you can increase the processing performance of a stock A1200 by at least a factor of 30. The only snag is that the custom chips always plod along at their original speed, and so the graphics performance can't increase at a similar rate.

Future possibilities

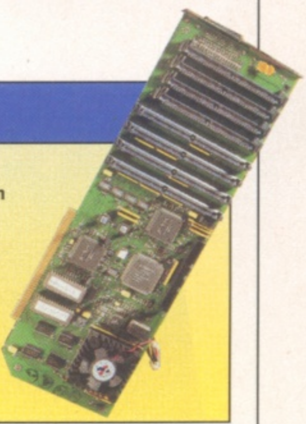
But the future for speed freaks is bright. The Amiga Walker features a fast 68030 processor as standard, and development of Amigas based on the PowerPC is continuing.

Those though lie in the future and existing Amiga owners want to know which board is best suited to their needs now. So, AS has scoured the country and rounded up every available accelerator board, ranging from simple RAM board to the monster 68060.

Over the next five pages we examine each card separately and give you the results of a set of identical tests performed on each machine. We've gone a lot further than simply running the boards through system analysing utilities – we've tested each board in real life situations too. So, you will not only find the MIPs and similar ratings, but also the performance when the accelerator is used in DTP and 3D rendering. A detailed explanation of the tests used can be found on page 19.

Without further ado, on with the (fast) show.

If you haven't got an A1200...



All the boards on test in this feature are for the A1200. We were hoping to be able to include a piece on the accelerator for the A600, but to date, we haven't had a functioning one in for review.

A1500 and A2000 owners should note that there is a new accelerator available for their machines, the Tekmagic 2060. It is available in both 040 and 060 versions and was reviewed in Amiga Shopper last issue (AS63) receiving a 90 per cent Star Buy. The Tekmagic is available from Power Computing, call them on ☎ 01234 273000.

Incidentally, it was incorrectly stated in the review that the accelerator fits into the Zorro slot; it does, of course, use the CPU slot. Graeme has been disiplined.

Jargon

MIPS – Millions of Instructions Per Second, a measure of the number of internal instructions the CPU can process.
MFLOPS – Millions of FLOating Point operations Per second. A test of the FPU (from SysInfo's point of view) and mathematical operations (from AIBB's point of view).
Mhz – Mega Hertz, a measure of frequency. A CPU operating at 50Mhz is receiving a time signal which changes 50 million times a second.
CPU – The Central Processor Unit is the chip which runs all the programs, keeps the OS going and determines how fast the computer goes.
FPU – Floating Point Unit. The chip which is especially good at hard sums such as those performed by raytracing software. An optional extra for 68000, 68020 and 68030 processors, but an integral part of 68040 and 68060 processors.



A1200

The base machine that all these cards used is our beloved A1200. Even in its unexpanded state, it's no slouch and can perform very well indeed for home users. Ex-A500 owners all praise their upgrade, never having realised the speed at which an Amiga can run. But even they find themselves craving faster machines and thankfully they can have them. Whether the A1200 was your upgrade or your entry level Amiga, further expansion is everyone's goal. This Supertest will help you decide which is the most suitable board for your needs.

Price:	£399
CPU:	68020
CPU speed:	14Mhz
FPU:	n/a
FPU speed:	n/a
SIMM sockets:	none
SCSI interface:	none
PCMCIA friendly:	n/a
Battery backed clock:	n/a
Tests	
Final Writer test:	n/a
Imagine 4.0 test:	n/a
SysInfo tests	
SysInfo MIPS:	1.34
SysInfo FLOPS:	n/a
SysInfo Dhystone:	1284
AIBB tests:	
Write Pixel:	2.96
Mem Test:	2.72
FLOPS:	2.07

Power 4Mb RAM Expansion



This is Power Computing's latest memory only expansion. It's a small card, with 4Mb of RAM in the form of some large, fat chips soldered directly onto the board. There is a PLCC socket for an FPU, and although the tested unit was a prototype, the finished unit will have a socket for an FPU oscillator. You can see that even adding nothing but memory makes a huge difference to the speed of the A1200. If you have an internal hard drive, expect it to speed up as well, once extra memory is present.

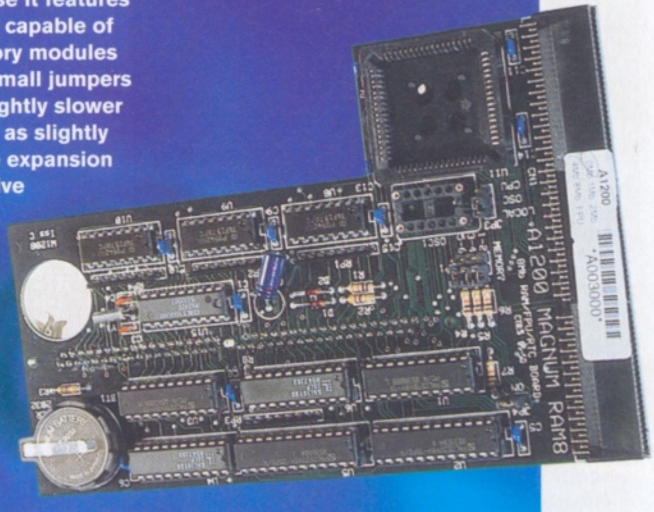
Recommended

Price:	£100 (including 4Mb)
Power ratio:	29.1
CPU:	n/a
CPU speed:	n/a
FPU:	Option
FPU speed:	Option
SIMM sockets:	None – 4Mb of RAM is surface mounted
SCSI interface:	No
PCMCIA friendly:	n/a
Battery backed clock:	Yes
Tests	
Final Writer test:	86.36
Imagine 4.0 test:	3:19
SysInfo tests	
SysInfo MIPS:	2.91
SysInfo FLOPS:	n/a
SysInfo Dhystone:	2793
AIBB tests:	
Write Pixel:	4.31
Mem Test:	5.87
FLOPS:	3.59

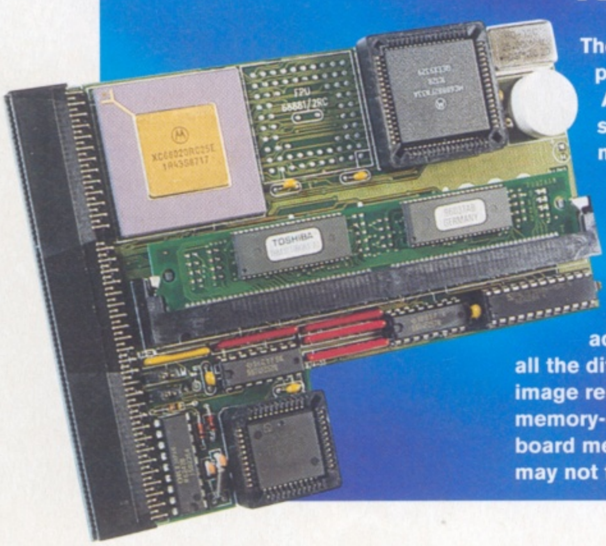
Magnum RAM 8 Board

Price:	£49.99 (£119.99 with 4Mb)
Power ratio:	24.00
CPU:	n/a
CPU speed:	n/a
FPU:	Option
FPU speed:	Option
SIMM sockets:	One (2Mb, 4Mb, 8Mb)
SCSI interface:	No
PCMCIA friendly:	Only with 4Mb or less installed
Battery backed clock:	Yes
Tests	
Final Writer test:	87.02
Imagine 4.0 test:	3:19
SysInfo tests	
SysInfo MIPS:	2.88
SysInfo FLOPS:	n/a
SysInfo Dhystone:	2764
AIBB tests:	
Write Pixel:	4.28
Mem Test:	5.83
FLOPS:	3.57

This board is another memory only card, but it is considerably larger than the Power Computing unit because it features a 72-pin SIMM socket. This is capable of accepting 2, 4 and 8Mb memory modules and you'll need to set some small jumpers accordingly. In tests it was slightly slower than the Power board as well as slightly more expensive, although the expansion options make it more attractive – if you remember that with 8Mb it clashes with the PCMCIA expansion port. It, too, has a PLCC socket for an FPU, complete with oscillator socket.



Apollo 1220



The Apollo 1220 uses the same processor already present in the A1200, but increases the operating speed to 25Mhz. In theory, this makes it more compatible with software than an 68030 based card, but in practice it makes little difference. Using a 68020 does, however, keep the price down. The inclusion of an FPU as standard is good to see as it adds little to the price but makes all the difference to budget conscious image render fans (compare it to the memory-only cards). The design of the board means that large SIMM modules may not fit, so be careful.

Price:	£99.99 (£199.99 with 4Mb)
Power ratio:	22.25
CPU:	68020
CPU speed:	25Mhz
FPU:	68882
FPU speed:	25Mhz
SIMM sockets:	One (1Mb or 4Mb)
SCSI interface:	No
PCMCIA friendly:	n/a
Battery backed clock:	Yes
Tests	
Final Writer test:	60.26
Imagine 4.0 test:	1:49
SysInfo tests	
SysInfo MIPS:	4.45
SysInfo FLOPS:	0.71
SysInfo Dhystone:	4270
AIBB tests:	
Write Pixel:	5.25
Mem Test:	8.77
FLOPS:	5.39

Make sure you get what you've paid for

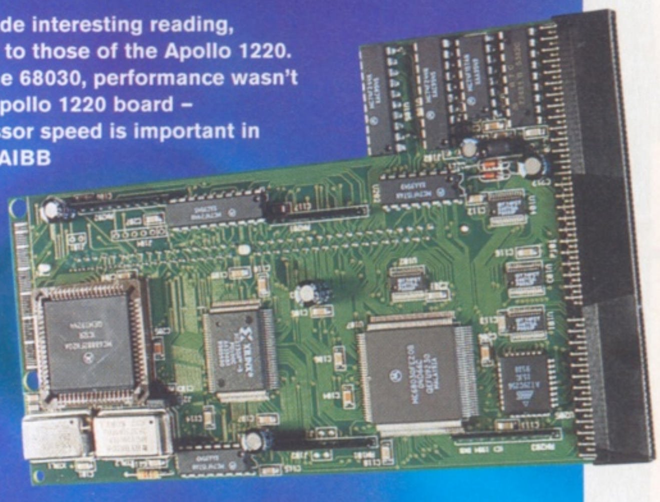
When you are buying a board, make sure you are getting exactly what you have paid for. Confirm that the processor is not 'overclocked' (running at a speed beyond which it was designed for) and that it is a brand new component. Confirm the speed of any SIMMS supplied, and that these, too, are brand new.

If you have a heavily expanded A1200, you may need to uprate your power supply to take into account the extra power required by the new processor.

Price:	£119.95 (£199.95 with 4Mb)
Power ratio:	25.90
CPU:	68030
CPU speed:	28Mhz
FPU:	68882 (optional)
FPU speed:	28Mhz (optional)
SIMM sockets:	One (2, 4, 8, 16, 32, 64, 128Mb)
SCSI interface:	Optional – £79.95
PCMCIA friendly:	Yes
Battery backed clock:	Yes
Tests	
Final Writer test:	60.52
Imagine 4.0 test:	1:45
SysInfo tests	
SysInfo MIPS:	5.18
SysInfo FLOPS:	0.75
SysInfo Dhystone:	4970
AIBB tests:	
Write Pixel:	3.68
Mem Test:	6.40
FLOPS:	5.66

Viper MK II-28

The results of this card made interesting reading, especially when compared to those of the Apollo 1220. Although the Viper uses the 68030, performance wasn't markedly faster than the Apollo 1220 board – demonstrating how processor speed is important in the 68020/68030 war. The AIBB results were particularly disappointing. In its favour, the Viper is a more flexible card, with better support of SIMMs (up to 128Mb!), PCMCIA-friendliness and an optional SCSI interface. When comparing them, remember the Apollo includes an FPU as standard – buying one for the Viper could add between £20 and £90 depending on speed.



How much power?

Everyone wants their Amiga to go as fast as possible, but realistically and in all honesty, how much power do you really need? Do you really have to spend the price of the A1200 over again on one small expansion board?

The unexpanded A1200 is great for most games: shoot-em-ups, football management games and platformers will usually not benefit much from adding extra memory or speed. Some won't even know the faster processor or memory is present and will run at exactly the same speed.

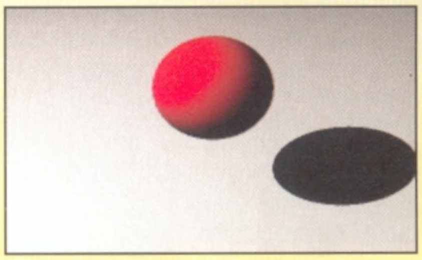
The story is different for the serious games player, though. More and more games are starting to demand extra processing power in order to work. Players looking to run 3D games such as Alien Breed, Breathless or Gloom will soon be crying out for a fast 020 or 030 card, at the very least.

Everyday Workbench stuff is perfectly acceptable on the stock A1200, but run a few small applications at once or one big one and you soon overstretch the system. Word processing with packages such as Final Writer or WordWorth usually requires only additional memory, although for larger projects or Desktop Publishing an 030 or even 040 is sometimes necessary – however, as demonstrated by the Final Writer test in the round-up, the increase in performance is not as dramatic as you might hope. This could be due to the heavy use of Chip RAM by fonts, and the reliance on the graphics hardware for screen updates. Perhaps surprisingly, using the Amiga in a MIDI music environment isn't particularly stressful as long as some Fast memory is present. However, if you plan any involved sample manipulation or creation, lots of memory and a 68030 will help a great deal.

Having serious hardware needs a good excuse. Anyone who uses the Amiga to generate rendered images will already be looking at the 040s and 060s, and it's not hard to see why. An Amiga with an 040 will render images 10 or more times faster than an A1200 with only Fast memory. That means an animation which takes a day on the 040 system takes a week and a half on the slower system, so it's easy to see that an 040 can pay for itself very quickly. (In some circumstances it can actually be cheaper to buy a second Amiga and kit it out, so do your sums carefully).

Few people really need the extra power but it's hard to do without it once you have tried it. As a final word of advice: get a system which is slightly faster than you think you need, with more RAM than you think you'll use. Then make sure you have a fast hard drive, a good power supply and sit back and enjoy.

The tests



Not the most exciting render, but the Imagine test used gives an indication of a processor's ability to handle 3D jobs.

Imagine test
Render an image of 256 x 256 pixels in full trace with shadows. If there is an FPU, use the FPU version of Imagine, otherwise use the Integer version. Times in minutes and seconds.

Final Writer test
Load a document, select it, justify it in different ways and alter the font size. This should test common actions such as processing the text and re-drawing fonts on the screen. Times in seconds and hundredth's of seconds.

Power ratio
A value invented for this round-up, calculated by taking the MIPS figure divided by the price of the board when supplied with 4Mb of RAM, then multiplied by 1,000 to make a decent number for comparison purposes. Testing without 4Mb of RAM is useless; with no Fast RAM, Sysinfo reports that the Blizzard 060 is working at 1.06 MIPS! So, the ratio includes the current prices of 4Mb of memory. The bigger the result, the better.

SysInfo
A popular program for quickly determining the speed of an Amiga. Although often criticised for inaccurate results, the MIPS result is usually reliable and was used to calculate the power ratio.

Amiga Intuition Based Benchmark (AIBB)
A respected program for testing the characteristics of an Amiga. We used it to test the speed at which the OS writes to the display (WritePixel - showing the speed advantage in agmes like gloom and also how the custom chips can hamper results), moves memory around (MemTest) and performs floating point calculations. All AIBB results are compared to standard 7Mhz A600. Because of incompatibility problems, the 68060 result was achieved by fooling AIBB into thinking it was a very fast 68000.

▶ 20

Magnum 030/40



This is the hottest board around at the moment, and we've received a great deal of requests for a review. The Magnum 030/40 packs a lot of power into a very low-cost solution. The processor is a 40Mhz 68030, which is the same as in the new Amiga Walker prototype. An optional 33Mhz 68882 FPU is available for rendering fans and it costs a reasonable £40. The single SIMM slot takes SIMMS of practically any size. The Magnum (including the RAM only board) comes with a copy of Directory Opus v4.12. Comparing the price of this card to the Viper 28 makes it easy to choose the one to go for.

Recommended

Price:	£139 (£209.99 with 4Mb)
Power ratio:	31.71
CPU:	68030
CPU speed:	40Mhz
FPU:	68882 (optional)
FPU speed:	33Mhz (optional)
SIMM sockets:	One (1, 2, 4, 8, 16, 32, 64, 128Mb)
SCSI interface:	Optional – £79.99
PCMCIA friendly:	Yes
Battery backed clock:	Yes
Tests	
Final Writer test:	49.64
Imagine 4.0 test:	1.24
SysInfo tests	
SysInfo MIPS:	6.66
SysInfo FLOPS:	0.96
SysInfo Dhystone:	6384
AIBB tests:	
Write Pixel:	4.33
Mem Test:	7.77
FLOPS:	7.40

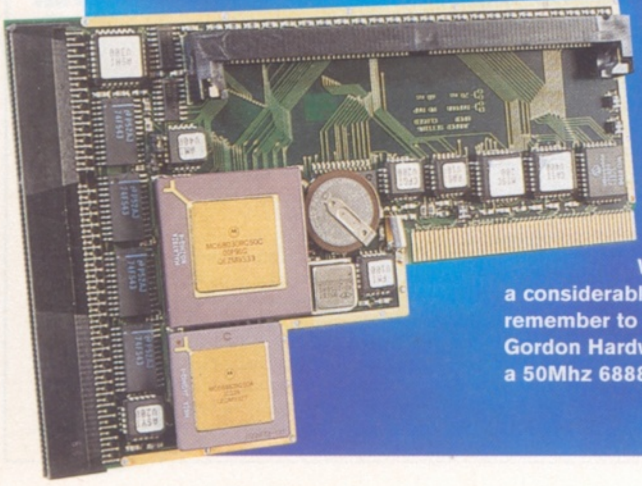
Viper MK II-50

Price:	£199.95 (£289.99 with 4Mb)
Power ratio:	30.62
CPU:	68030
CPU speed:	50Mhz
FPU:	68882 (optional)
FPU speed:	50Mhz (optional)
SIMM sockets:	One (2, 4, 8, 16, 32, 64, 128Mb)
SCSI interface:	Optional – £79.95
PCMCIA friendly:	Yes
Battery backed clock:	Yes
Tests	
Final Writer test:	42.48
Imagine 4.0 test:	1:04
SysInfo tests	
SysInfo MIPS:	8.88
SysInfo FLOPS:	1.24
SysInfo Dhystone:	8515
AIBB tests:	
Write Pixel:	4.88
Mem Test:	9.71
FLOPS:	9.26

This is the same board as the Viper 28, but fitted with a 50Mhz 68030. It's quite large, which makes installation tricky. I was unimpressed with the Power logo stuck over the 68030 processor obscuring the speed. When buying, obtain assurances that the processor is not being overclocked. As with any 68030 or higher card, if you want to use Virtual Memory utilities, make sure you are getting a CPU with a fully functioning MMU.



Blizzard 1230-IV

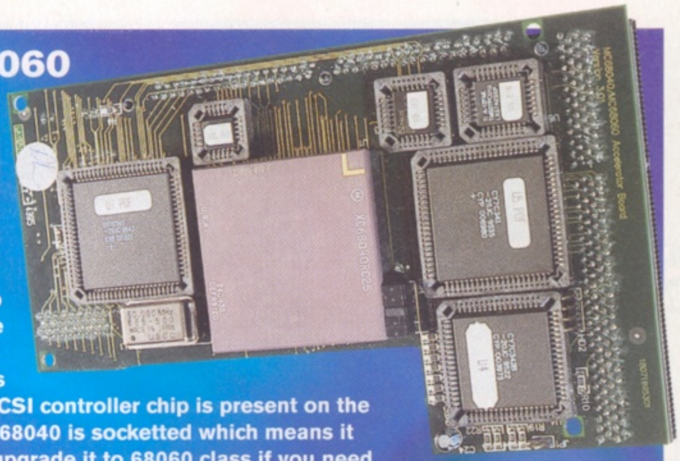


The Viper looked fast, but you could feel the difference when this card was installed. Everything was faster and smoother, and the results cleared showed which is the best 68030 card around. AIBB clocked a massive jump in performance, which means that the Blizzard would speed up Amiga Workbench and 3D games by a considerable margin. As before, remember to add the cost of a FPU – Gordon Hardwoods are quoting £99.95 for a 50Mhz 68882.

Price:	£179.95 (£269.90 with 4Mb)
Power ratio:	36.68
CPU:	68030
CPU speed:	50Mhz
FPU:	68882 (Optional)
FPU speed:	50Mhz (Optional)
SIMM sockets:	One (2, 4, 8, 16, 32, 64, 128Mb)
SCSI interface:	Optional – £89.95
PCMCIA friendly:	Yes
Battery backed clock:	Yes
Tests	
Final Writer test:	34.88
Imagine 4.0 test:	0:56
SysInfo tests	
SysInfo MIPS:	9.90
SysInfo FLOPS:	1.33
SysInfo Dhystone:	9489
AIBB tests:	
Write Pixel:	8.92
Mem Test:	12.66
FLOPS:	10.64

Price:	£399.95 (£489.90 with 4Mb)
Power ratio:	38.09
CPU:	68040 (060 available)
CPU speed:	25Mhz
FPU:	68882 built-in
FPU speed:	25Mhz
SIMM sockets:	One (up to 32Mb)
SCSI interface:	Optional – £29.95
PCMCIA friendly:	Yes
Battery backed clock:	Yes
Tests	
Final Writer test:	28.62
Imagine 4.0 test:	0.29
SysInfo tests	
SysInfo MIPS:	18.66
SysInfo FLOPS:	4.41
SysInfo Dhystone:	17883
AIBB tests:	
Write Pixel:	10.26
Mem Test:	10.88
FLOPS:	17.12

Falcon 040/060



The Falcon is a big brute of a card: you'll need to disassemble your A1200 to fit it and attach the fan to the top of the processor. Bizarrely, the fan is screwed in to locate half covering the chip, but works just fine. The SCSI option is cheaper because the SCSI controller chip is present on the board already, and the 68040 is socketted which means it should be possible to upgrade it to 68060 class if you need more power.

Apollo 1240 Turbo

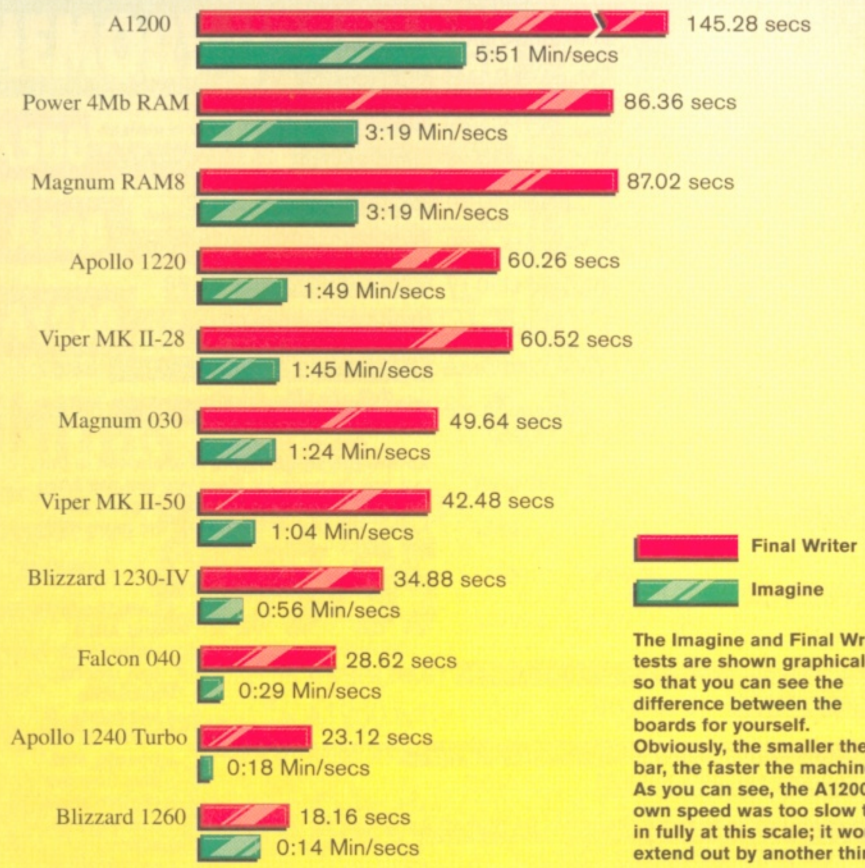


This is the very latest accelerator card from the Apollo stable, and it's staggeringly fast. It uses the 68040 processor which is not known for hanging around. The times it returned make it a desirable piece of hardware – certainly worth considering if you are in the market for an A4000. The cunning design allows the surface mounted 68040 to have a tiny fan fitted on top and there is still space to replace the trapdoor. The 68882 maths processor is built in and powers through ray traces and other maths intensive operations. A 25Mhz version of the card is available for £339.99, and an 060 is now available too – it costs £574.99 for a 50Mhz version. The only snag is to check that your power supply can handle the extra demand the 68040 places on it.

Trade-ins

Before you buy you card, ask your dealer if they allow a trade in allowance: some dealers, such as Gordon Harwood, can make it easy for you to upgrade your Blizzard boards and it is worth asking.

Final Writer and Imagine test results



The Imagine and Final Writer tests are shown graphically so that you can see the difference between the boards for yourself. Obviously, the smaller the bar, the faster the machine. As you can see, the A1200's own speed was too slow to fit in fully at this scale; it would extend out by another third.

Price:	£449.99 (£529.99 with 4Mb)
Power ratio:	56.52
CPU:	68040
CPU speed:	40Mhz (other available soon)
FPU:	68882 built in
FPU speed:	40Mhz
SIMM sockets:	One up to 32Mb (second socket optional)
SCSI interface:	Optional – £79.99
PCMCIA friendly:	Yes
Battery backed clock:	Yes
Tests	
Final Writer test:	23.12
Imagine 4.0 test:	0.18
SysInfo tests	
SysInfo MIPS:	29.96
SysInfo FLOPS:	7.60
SysInfo Dhystone:	28705
AIBB tests:	
Write Pixel:	13.28
Mem Test:	15.27
FLOPS:	27.37

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Recommended

Blizzard 1260

Hold onto your hats, as we finally come to the breathtaking power of Motorola's last processor, the 68060. The Blizzard 1260 was reviewed in AS60, and it's still the only 060 we've seen in the Amiga Shopper office. It's staggeringly fast, of course, but it is also the most expensive card on test – and that means the Power Ratio is considerably less than that of the Apollo 68040 card. The Amiga OS never quite caught up with the 68060, and special software is needed to patch some features: without it, the Final Writer test takes 19.66 and the Imagine render takes an amazing time of 2:06 – slower than the Apollo 1220.

Price:	£599.95 (£689.90 with 4Mb)
Power ratio:	56.12
CPU:	68060
CPU speed:	50Mhz
FPU:	68882 built in
FPU speed:	50Mhz
SIMM sockets:	One (up to 64Mb)
SCSI interface:	Optional (includes 2nd SIMM socket)
PCMCIA friendly:	Yes
Battery backed clock:	Yes
Tests	
Final Writer test:	18.16
Imagine 4.0 test:	0:14
SysInfo tests	
SysInfo MIPS:	38.72
SysInfo FLOPS:	27.76
SysInfo Dhystone:	37101
AIBB tests:	
Write Pixel:	15.62
Mem Test:	13.14
FLOPS:	60.55

Best of the bunch?

If you are on a tight budget, you won't do worse than the Power 4Mb RAM board. Although it can't be expanded, it is one of the fastest and cheapest memory-only boards around and it will make a heck of a difference to the speed of a standard A1200.

If you have a little more to spend, the Magnum 030/40 is a good choice, with an excellent balance of performance and price. For power users, the Apollo 68040 card is a surprisingly good option, and it still leaves quite a large jump in terms of cash to the top-of-the-range Blizzard 1260.

Obviously, if you're after real raw power, then the 68060 based Blizzard is the way to go. It's the fastest A1200 card currently available, as you can see from the power ratio, but it isn't priced in the realms of science fiction.

Suppliers

Please contact the following suppliers for prices and availability. Remember memory prices are prone to change very quickly.

- **Blizzards, Gordon Hardwood: ☎ 01773 836781**
- **Apollos, Siren Software, ☎ 0161 796 5279**
- **Magnum, Wizard Developments, ☎ 01322 527800**
- **Viper & Falcon, Power Computing, ☎ 01234 273000**

MIPs and AIBB test results



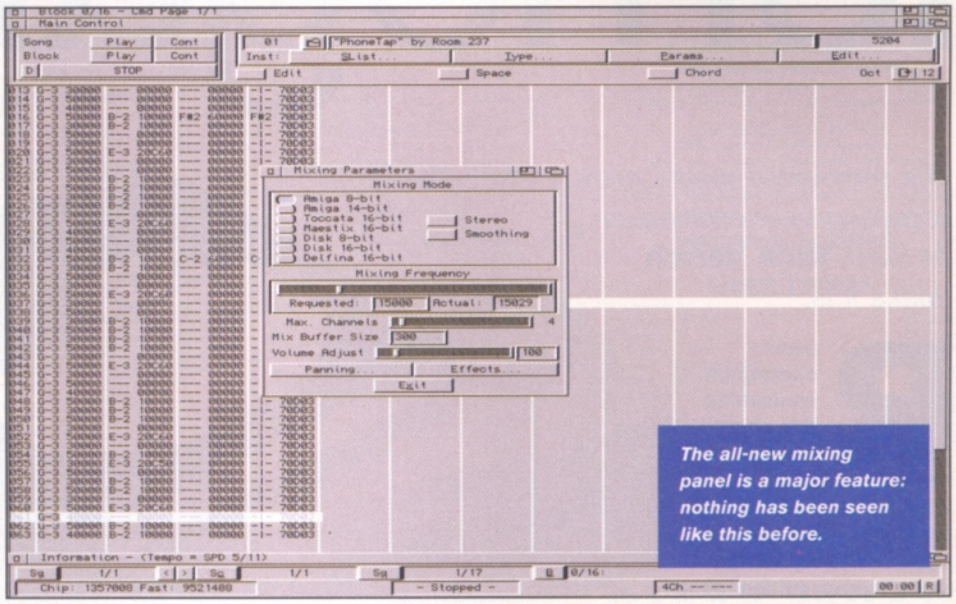
Left: **The MIPs and AIBB Write Pixel test results show the incredible power of the boards, and also how the custom chips can hamper some performance.**

Above: **The power rating is explained in the test box on page 19. Here you can see how the boards compare in terms of price and speed. The higher the rating, the more MIPs you get for your pound.**

Preview

OctaMED Sound Studio

The sound tracker is dead! **John Kennedy** *examines the future of Amiga music.*



The all-new mixing panel is a major feature: nothing has been seen like this before.

The future of Amiga sound programs is coming, and it's going to be in the form of Sound Studio. The team which brought us OctaMED has been creating what looks to be the most exciting development on the audio front since, well, the original Amiga.

A demo version is now available, and although bearing an uncanny resemblance to the latest version of OctaMED, SoundStudio works in altogether different way. OctaMED, like all sound tracker programs, ties the sound output tightly to the output device: namely, the Amiga hardware. Since the Amiga has four channels of 8-bit sound, most trackers can play four sounds at once. With a little twiddling and clever programming you can fake extra channels of sound, but the quality drops as a result. You don't get something for nothing.

Third party hardware

SoundStudio divorces the sample replay software from the hardware, and adds an abstraction level in the form of a 'virtual mixer'. The sounds are triggered from the tracker system in the usual way, but before they can be heard, they pass through the mixer routines. The mixer combines the samples and generates the output. The output could be standard Amiga audio hardware, or it could be external hardware such as the Aura unit from HiSoft or the Toccata, Maestix or Delfina 16 bit audio cards. At last – usable sequencing software for add-on third party sound hardware!

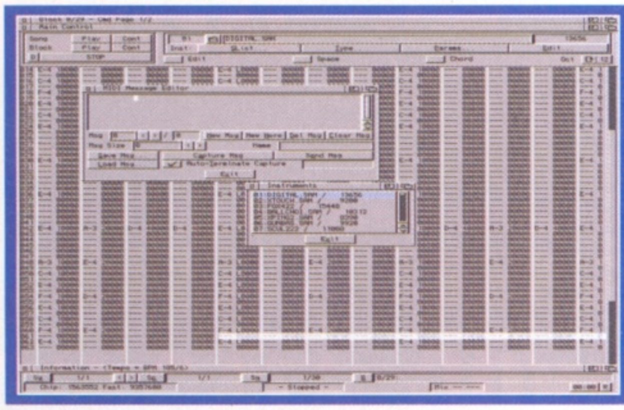
Virtual mixing makes extra tricks possible. The Amiga's processor is effectively doing the job of a DSP, so it's possible to add digital effects like echo. The combination of the samples is performed at a user-specified mixing frequency, constrained by the limitations of the output device. Each instrument can also be given a position in the stereo image, and panned from left to right. As an example of its speed, the A3000/25 can play 10 channels at 48kHz through the Toccata Zorro card. If any future Amigas feature DSP chips, SoundStudio will be ready to take advantage of them.

Up to 64 independent audio channels are provided, and 8 or 16-bit samples supported. Samples can be stored in Fast RAM, making much longer sounds possible. You can play samples backwards, or ping-pong them back and forth. SoundStudio can also sample directly to disk, again in 8 or 16-bit resolution, and with special interpolation routines for high quality samples. This feature opens up amazing possibilities, such as re-sampling a SoundStudio block of tracks as one long sample, effectively freeing up three tracks for more sounds.

SoundStudio is packed with other features too: support for S3M and FastTracker 1.0 modules, a notation editor, ARexx support, improved MIDI controller options and dozens of other additions and tweaks. The author, Teijo Kinnunen, has listened to users and added as many of their requests as possible – which is why there is a built in 'MIDI slave' mode for using an Amiga as a remote sample player. It will still function perfectly as a normal tracker program, as the mixing can be switched on or off as required. Extra functions, such as note search-and-replacing and the ability to pop-up an AmigaDOS shell on the OctaMED screen will make it easier to use and more powerful than any other tracker available.

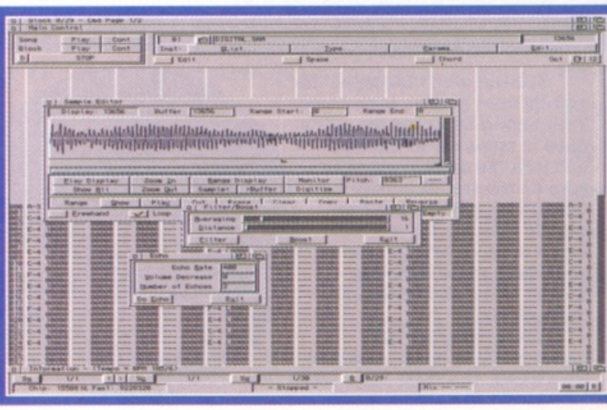
Smart stuff

The demo version looks extremely smart, and the full version is due in late July. The price to registered V6 users will be £35, and £70to everyone else. Meanwhile, you can contact RBF Software by email (rbfsoft@cix.compulink.co.uk). You can visit the Web site at http://www.compulink.co.uk /~octamed/ where you can download the demo and give it a test run. It will also be on the next CD of Amiga Format. ■



***Left:** Existing features (such as MIDI support) have all been improved.*

***Right:** SoundStudio will sample to disk in 8 or 16-bit resolution.*



The Iomega Jaz drive

The removable media market is getting very exciting. At least, ***Nick Veitch*** *thinks it is.*



Recent excitement concerning this new storage device is certainly unusual, but the Iomega Jaz drive is hoping to build on the reputation and phenomenal response to its smaller cousin, the Zip.

Iomega are intent on wrestling a large share of the removable media market from Syquest, and so far they have been doing pretty well. The Zip drives were selling faster than they could be produced last year, and although Syquest hit back with the EZ drive, Iomega have now attracted a bit of a following.

The reason is simple – cheap, reliable and relatively fast storage. Whatever you use your machine for, you will eventually discover that you don't have enough hard disk space. While the best solution is obviously to get a huge, fast hard drive, this isn't the most affordable answer. It is far better to have a drive with removable cartridges which are relatively cheap, and that is exactly what the Jaz is.

Money matters

The drive itself is not exactly inexpensive – £530 would certainly buy you a bigger, faster SCSI drive, but this is more than compensated for by the fact that the cartridges cost only £100. As each cartridge holds exactly 1Gb (1024 Mb), that means you are getting just over 10Mb for every pound you spend.

> "The **reliability** factor could be the key to this market."

The cartridges themselves are scarcely bigger than a standard floppy disk, though they are about five times thicker. The workings are shielded in tough plastic, but I get the impression they are not quite as indestructible as the Zip cartridges – the sliding metal protector seems a little too flimsy for my liking.

Having said that though, the cartridge we have been rather exhaustively testing here is about the only SCSI device which hasn't failed in some way or another over the last two weeks. The reliability factor could be the key to this market – Syquest may have a big name and an established market, but their older 44 and 88Mb drives didn't exactly have an unblemished record in the reliability stakes.

Quicker than most

The most surprising thing about the Jaz is the transfer speeds it can maintain. Usually, because of the mechanics of removable drives, their performance is drastically below that of a traditional hard drive. All that changes with the Jaz, which is actually considerably faster than the average hard drive, with a sustained transfer rate of around 6Mb/second. The only downside to this is the rather loud noises the drive makes in operation. Fortunately in our office this is drowned out by Graeme's ridiculous "music", but if you need peace and quiet, maybe this isn't the mechanism for you.

Personally, I think that the smaller Zip drive is probably more use to most people. Although, in the long run, it would be cheaper to buy a Jaz, not many people have the need to store such huge volumes of data. But for people involved in video or music work, or for those needing to master CDs the Jaz may well be a very interesting option. ■

The SyQuest alternative

Syquest aren't taking all this activity from Iomega lying down. They rapidly launched the EZ135 drive in response to the Zip, and now the Syjet is about to take on the Jaz. Strangely, the Syjet is styled more like the Zip than the Jaz is – which is especially surprising considering how tediously dull all of the other Syquest hardware is.



But, so they tell me, performance is more important than looks. The Syjet has a larger capacity than the Jaz, with 1.3Gb of space on each cartridge. This is not a trifling difference, as it has important implications for CD mastering – a 1.3 capacity would allow space for two cd-sized partitions.

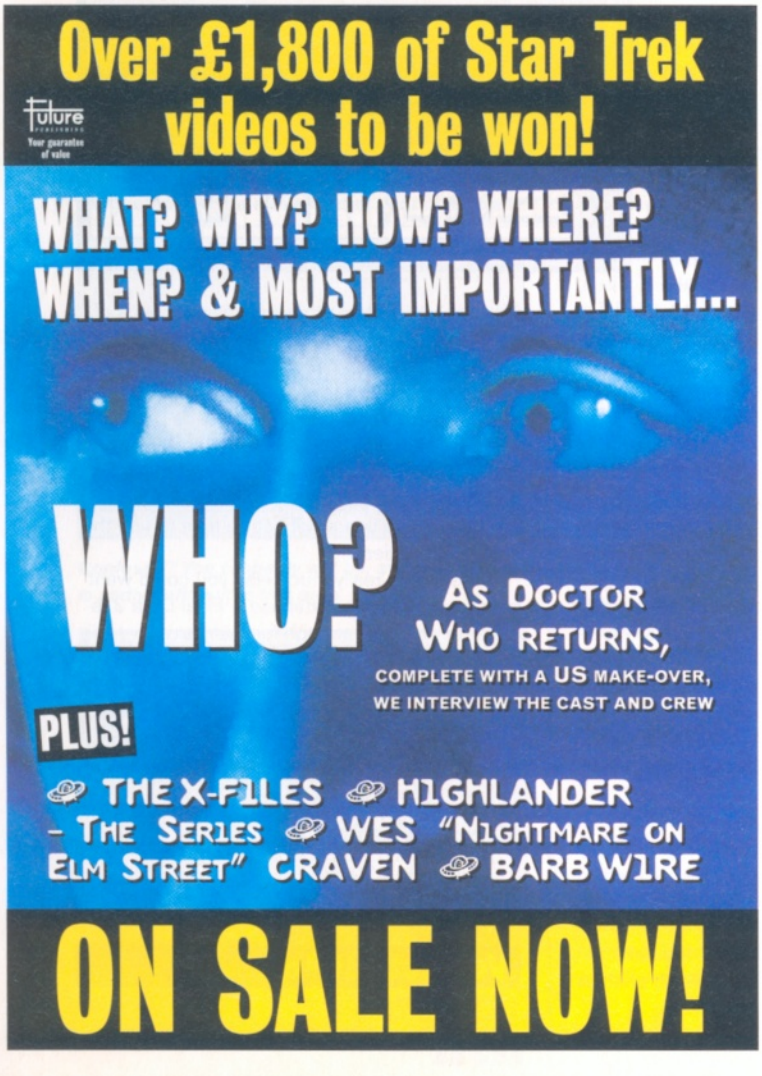
As far as speed is concerned, there probably won't be very much in it, and although a price is yet to be set for the UK market, it looks like the new Jaz drive is going to be up against some very stiff competition.

Iomega Jaz

AMIGA SHOPPER

Price:	£529.95 £99.95 per 1 Gb cart
Supplier:	HiSoft
Contact:	01525 718181

Verdict: 91% Star buy



Over £1,800 of Star Trek videos to be won!
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Your guarantee of value
WHAT? WHY? HOW? WHERE?
WHEN? & MOST IMPORTANTLY...
WHO?
AS DOCTOR WHO RETURNS,
COMPLETE WITH A US MAKE-OVER,
WE INTERVIEW THE CAST AND CREW
PLUS!
THE X-FILES
HIGHLANDER - THE SERIES
WES "NIGHTMARE ON ELM STREET" CRAVEN
BARB WIRE
ON SALE NOW!

FinalData3

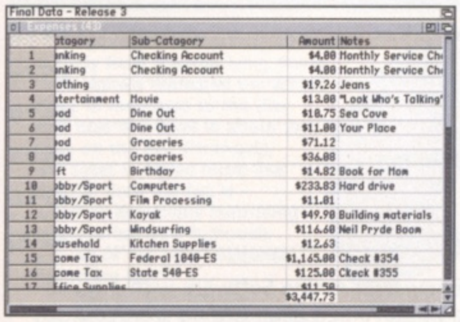
Stop falling asleep – databases can be exciting. ***Nick Veitch*** *says so, so it must be true.*

Databases are hardly the most glamourous of applications. You can't really imagine inviting your mates around to see the particularly spectacular video collection catalogue you may have created. However, they are incredibly useful, and bizarrely, as they are probably the oldest true computer application known to man (IBM started off by doing the U.S.A. census), they are also under almost constant redevelopment. To prove this point, I now draw your attention to Softwood's Final Data 3.

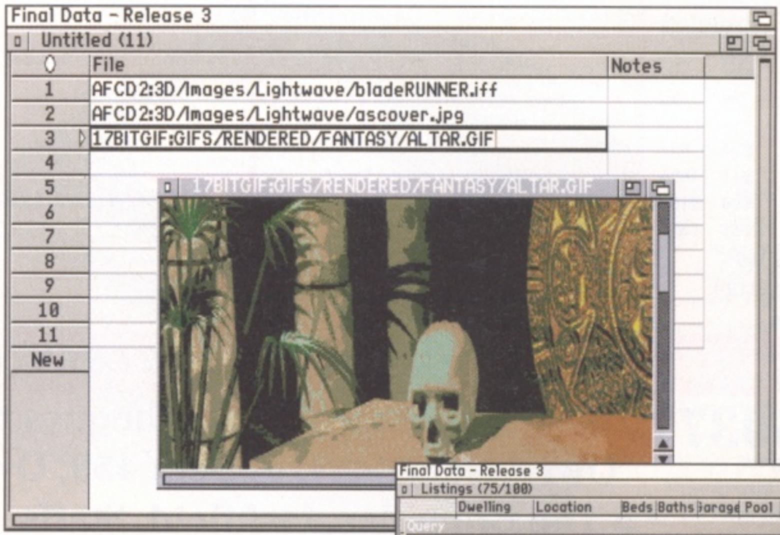
Final Data now has two more column types. The first of these is the RCalc column which is a rather simple spreadsheet style cell. Basically it holds a numerical value which is based on a calculation – which can involve values held in other numerical columns. This may sound complicated, but essentially it allows you to create databases for chequebook accounts, or more meaningful stock handling.

Noteworthy Addition

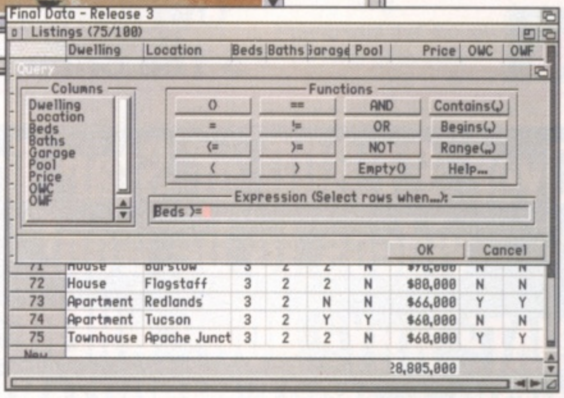
The second new type is actually more useful than it may sound. A "memo" field allows you to store large amounts of text with a particular record. Obviously it would be inconvenient to store these notes in a regular text column, and yet it is useful. For example, in your CD collection you may like to include notes of particular interest like: "The helicopter sample used in Waking the Witch was taken from Pink Floyd's The Wall" or something. Three asterisks appear in this column if a memo is present, and if you should click on it, a window will pop up allowing you to read the text.



The "Running calculation" field makes this sort of accounts nonsense a doddle.



Left: ***Support for datatypes means that your database can now be filled with sound and graphics, or indeed anything else you can find a datatype for.*** ***Below:*** ***Powerful query functions make data easier to manage.***



A few annoying omissions from previous versions have been cleared up, and thankfully being able to select multiple, non-continuous records is one of these. Now you can simply shift click on any records in the database you wish to select and it doesn't matter whereabouts in the list they appear. Also, there is now a proper Query facility which can handle more complicated searches such as finding every video in your collection featuring Denise Crosby which isn't an episode of Star Trek. All manner of logical operators are accounted for and there are some powerful functions such as Range, which checks if a field value falls between a given range.

Just my type

The big news for many users is that the database now supports datatypes. This means that sound and image files can also be attached to your database. The data files are not included in the database itself, but their paths are stored, so if you do include files, remember not to move them around.

The datatype files are included into the database simply by entering the pathname into a normal column. To process the file (i.e. play it or view it) simply select that field and chose "View Datatype" from the menu. You may specify whether graphics are displayed in a window on Final Data's screen or on their own separate screen – obviously depending on your screen preferences for Final Data, you are more likely to want to use a new screen.

For big databases of graphics, there is a new "Slideshow" menu command which enables the user to simply go through showing each of the datatype graphics in the entire database. Obviously the ARexx support for the software has been extended to include all of these new functions too.

Datatypes only became available with AmigaDOS 3.0, so, although the rest of the program will work perfectly happily on a 2.0 machine, these users will not be able to use the datatype facilities.

There isn't really much else you could want from a simple home database – Final Data 3 is certainly powerful enough for many small business applications too. The program doesn't offer the graphical flexibility of Digita's Datastore, but it is fast, easy to use and offers some very advanced features. If power means more to you than pretty things, this software is well worth considering. ■

Final Data 3

Price: £39.95

Supplier: Gordon Harwoods

Contact: 01773 836781

Verdict: 86%

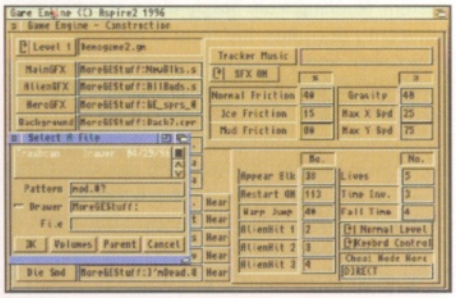
Game Engine

*Fancy yourself as a Bitmap Brother? **Nick Veitch** wouldn't mind being a Bitmap second-cousin by marriage...*

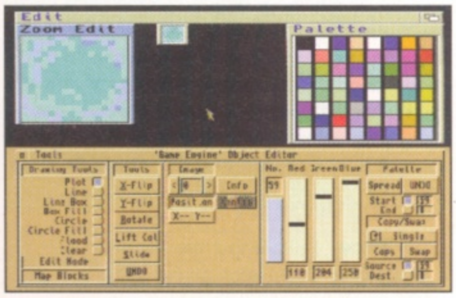
Generating your own games is one of the most popular reasons for getting into programming. Think about it. How many word processors have you ever seen programmed in AMOS? It isn't surprising then, that development engines specifically geared to producing games are always popular, and indeed, many have been quite good.

The creation system itself consists essentially of five modules, where different areas of game design are considered. The most important ones are the Object and Map editors.

The Object editor is really a specialised paint package, which helps the user to generate small tiles or objects. These are then used to create the playing area of the game and the characters that inhabit it. The drawing controls are simple but effective, and when combining them to create game maps, you can also attribute characteristics to surfaces, which can then determine the movement of your character.



Confused? You probably will be, and the manual is sadly deficient in this area.



Listen, it's a block of ice OK? Well, I don't care what you think really.



Create your very own platform games with style, panache, and a little help from all the demo objects provided.

There isn't really much to the Background editor, which is easily the weakest part of the system. Basically, this is used to program copper effects, so you can have multicoloured (i.e. weird) or gradient effect backgrounds.

Getting Animated

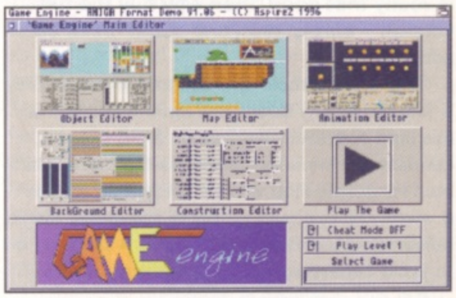
The Animation editor is used to define sequences of animated shapes, which become the characters which inhabit your game world. The Animator can only load in previously saved Game Engine animations, or individual frames from the Object editor. If you have an animbrush (and it is a lot easier to create animation frames in DPaint or Personal Paint) then all you can do is lay down all the frames in a single IFF and load them into the Object editor. This editor is a bit finicky when it comes to converting the IFFs to blocks, so study the manual carefully – fortunately there is a demo image provided to show you how it's done.

The Construction editor is used to build all the levels together, add soundtracks and effects, and fiddle around with other behaviour parameters. It can be a little confusing to work out what is going on though, even after reading the manual, so the best thing to do is load in an example and work it out from there.

The manual is not great, it has to be said. There is little more than an explanation of all the tools, buttons and menu items. A simple tutorial would have been useful, especially for the Construction editor.

Learning the game

Many programmers may tell you that you will learn nothing useful by creating a game in such a way, because you won't discover any of the cunning tricks necessary to make technically excellent games. While this is true to an extent,



The main Loader screen controls access to the other modules of the system.

they are also neglecting the one thing that sadly, many game publishers also neglect – gameplay. No game is good for more than a few hours, no matter how excellent the graphics are, or how cunning the special effects are – if you don't enjoy playing it. Gameplay is something you can explore quickly and easily with this system. Although it is rather restricted to platform games, novices can still learn a great deal.

You will obviously be able to create much more original games using a development system like Blitz Basic, but you will also have to invest a lot more time in learning how that language works. Game Engine allows you to easily produce interesting, challenging and pretty platform games, and that has to be worth something doesn't it? You can try out all the parts in the demo that was included on Amiga Format's Coverdisk, Issue AF84. ■

Game Engine

Price:	£24.95
Supplier:	Aspire 2
Contact:	01352 761798

Verdict: 78%

Wordworth 5 SE

David Taylor *takes a look at the Special Edition version of the powerful Wordworth 5 document processor.*



***Left:** The Text Effects (TM) allow you to add manic effects to the page easily. **Below:** Simply enter the text and choose the effect – either pre-defined or from the list supplied.*

The release of a cut down version of the Amiga's all singing, all dancing, WP confuses me a little. I can see from Digita's point of view, that they need to make sure their product is available to as wide a user base as possible, but the thought of a program designed to offer masses of features being stripped down for lower end usage seems a trifle bizarre. Surely, you could just make do with an earlier version or, if this version is really that good, then why buy the full version – surely everyone could make do with the SE?

It's not as simple as that though. Wordworth 5 (the full monty) does have more features than this special edition, but version 5 SE still contains the important additions that set it apart from version 3. (You will remember that version 4 was never released except in the Amiga Magic bundle and hence the new version was called 5 to avoid confusion.)

Differences

The major difference between the two versions is the system requirements. Wordworth 5 requires a hard drive or two floppies with 3Mb of free RAM, while 5 SE works on a single floppy system with only 2Mb of free RAM. In practice, two floppy drives are really a minimum for even the SE version, never mind the full product. Which comes down to the fact that Wordworth is a professional level program and you cannot expect it to run on a minimum spec machine. If you are serious enough to want the advantages of 24-bit graphics, style sheets, font effects and the like, then what are you doing without a hard drive? The same goes for memory. Putting together a magazine requires machines with over 32Mb of RAM. Now some of that is down to huge system requirements and some to large document size, that most users won't need, but there's no escaping the fact that 2Mb is not enough.

With all that said, I'm sure there are people with standard A1200s who want the power of Wordworth 5. If I haven't convinced you to upgrade your hardware or your bank manager simply won't let you, then SE is the compromise for you. It offers the majority of the features that you are likely to need.

The Text Effects and Style Sheets, which are two of the main features from 5, are here in full. Text Effects allow you to create stunning shapes like word spirals, while Style Sheets allow you to set up parameters for fonts, paragraphs and tabs to drop onto text instantly rather than redifining them each time.

Cut backs

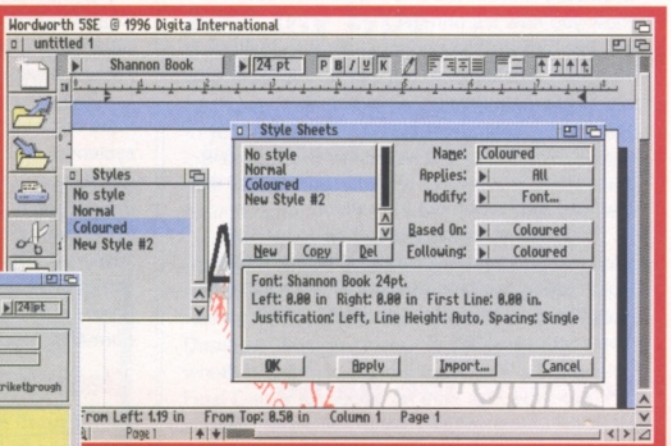
The Special Edition also allows you to import 24-bit IFFs, but doesn't support other file formats like GIF, PCX or TIFF which the full version does. Neither is there any ARexx support, although I can't say I missed it. In fact, I can't really see how you could make use of it on a floppy based system. More importantly, the font support is pruned in the SE version. You don't get the 50 scalable fonts that come free with version 5 and it can't use all the different font types that 5 can.

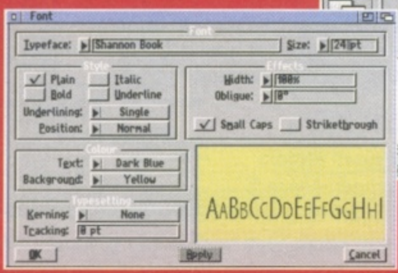
When using SE, although you might not miss any of the features, you will find you are being let down by the constraints of your system. Running from floppy disks, the machine constantly accesses the drive to get font information and changing the fonts or setting up and using Style Sheets becomes extremely time consuming.

It keeps coming back to the inescapable conclusion that Wordworth 5 SE is a damn fine product, but that you've got to have adequate hardware. Yes, it is technically possible to run it from floppy, but you have to have the patience of an angel. Perhaps, I'm just too used to a hard drive now and maybe dedicated floppy users are well accustomed to waiting for disk access. If that's the case then SE is for you. If, however, you are drawn to SE rather than the full 5 because of the price difference, thinking that you don't need the extra features, then I'd recommend that you take advantage of one of the numerous upgrade offers Digita have run in many magazines (including AS63) which will let you get it for less than the RRP of SE! ■

Wordworth 5 SE

***Right:** The Style Sheets are still available in this version.*





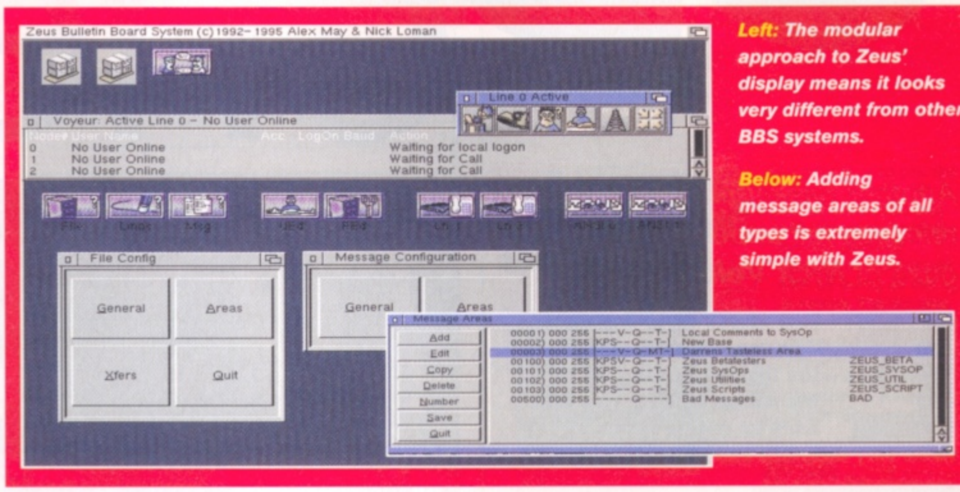
***Left:** Fonts can be adjusted in many ways: size, kerning, width, colour, background and style.*

Wordworth 5SE

Price:	£39.99 (but see above)
Supplier:	Digita International Ltd
Contact:	01395 270273

Verdict: 89%

Zeus BBS



***Left:* The modular approach to Zeus' display means it looks very different from other BBS systems.**

***Below:* Adding message areas of all types is extremely simple with Zeus.**

Has Zeus got what it takes to make it as the future of BBS software? ***Darren Irvine*** *takes a good look.*

In the past, BBS software has been largely preconfigured, and the SysOp was only allowed a very limited degree of freedom to decide on the way in which the board would operate. Sure, you could change the menus and, of course, it was up to the SysOp to determine file and message areas, but the overall feel was the same with every board running a particular piece of BBS software.

Zeus has taken a totally different approach from these older structured systems. Everything about Zeus is SysOp definable, with the whole shebang controlled with useful and familiar ARexx scripts. Everything about Zeus has been given a modular approach, so that you can run whichever bits of the system that you need at a particular time.

One Step Forward

Apart from its novel approach to the overall design and function of the board, Zeus also offers built-in support for just about everything you could want in addition to normal BB S operations. From full Fidonet support, to built-in gating for Internet Email and Usenet newsgroups – Zeus has it all.

As if this wasn't enough, Zeus also has a completely new concept for Bulletin Boards in the form of its ZAPP system. This is a BBS equivalent of the Internet HTTP system for transferring World Wide Web pages, and it enables the BBS users to have their own Web Page on the BBS, which can be displayed with a standard Amiga Web browser (Aweb, Voyager, and so on).

This is an exciting step for BBS systems, because to a certain extent it removes one of the arguments in the continual "My network is better than your network" debate between Fidonet and Internet aficionados – that is, that the Internet is inherently better simply because it has pictures. In theory, you could use this Zap system to make your entire board run as if it were a series of Web pages.

How Zeus Compares

There are a number of other BBS systems available for the Amiga, but only two stand out as being any sort of competition for Zeus, and both of these have their flaws. Firstly, Xenolink. The development of this system has changed hands completely, thus its development has slowed down considerably, as the new team try to get to grips with the task of changing and improving someone else's source code. Zeus already has all the existing features of Xenolink, and more besides.

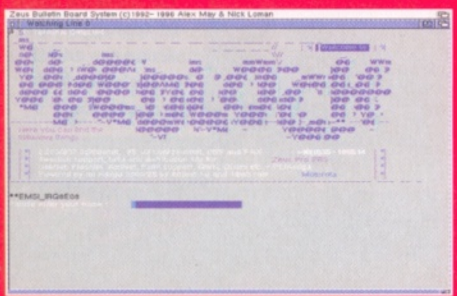
The other contender is Excelsior. This is a largely pre-configured system, and its userbase is dwindling – many Excelsior SysOps are already opting for the flexibility of Zeus, and the consensus of opinion at the recent World Of Amiga Show is that Zeus is the way forward for BBS software.

In operation, the sheer configurability and flexibility of the Zeus script system means that if there's something Zeus can't do, you can write a script to make it do so. But because of this flexibility, Zeus is definitely aimed at the first time SysOp who has played around with MAX's BBS and decided they want a real board.

You'll also need fairly extensive ARexx knowledge to get the most from the Zeus scripting system. Zeus still has a few bugs, mostly in the area of the Fidonet Mailer, but the development team are confident that they can sort these out. So, if you're looking for a high specced BBS system, and you've already got a certain amount of BBS experience, Zeus is definitely the package for you. ■

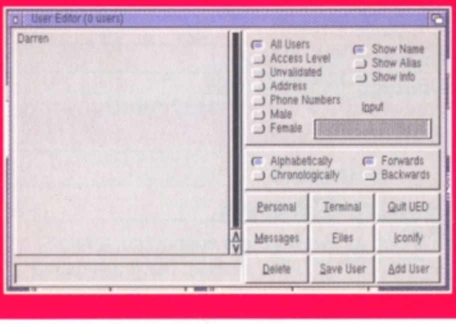


***Left:* Installation of Zeus is fairly straightforward, and the result is a set of very nicely designed icons.**



***Above:* Zeus initially comes with an existing BBS setup (the WedlockBBS in Sweden) and you can use this as a starting point for designing your own board.**

***Below:* As well having a comprehensive collection of options, the user editor is also very clear and straightforward to use.**



Zeus BBS

Price:	£99
Supplier:	Zeus Developments
Contact:	01273 474352

Verdict: 90% Star buy

CD check out

*Another basketful of CD-ROM releases fall under the watchful gaze of **Nick Veitch**.*

Every month more and more CDs are released, making it the fastest growing sector of the Amiga market. This time we'll be taking a look at three very different and unusual releases.

1078 Weird Textures



Well, they're not lying. These are rather weird textures, and there are 1078 of them. Stored in a variety of formats (GIF, JPEG and IFF amongst others) these images are all designed to tessellate – i.e. they can be endlessly repeated with no apparent seam. This would make them ideal for some raytracing applications, if only the textures were just a bit more normal.

Accompanying the CD is a rather attractively produced 24 page booklet with thumbnails of all the images, so you don't have to wade through them all to find one you like. All the images are 256x256, which is the unofficial standard for tessellation maps, but doesn't really make it easier if you want to use them for something else.

While this collection of images can't be faulted on a technical or organisational level, most of the images are very strange and wouldn't suit many traditional texture applications such as backdrops for multimedia, or surfaces for rendering – unless of course, you wanted to make some very strange animations. The pictures here are best described as a series of visual representations detailing the thought patterns of people who have listened to too much rave music.

1078 Weird Textures

Price: £9.99
Supplier: Ground Zero Software
Contact: 0117 9076733
Verdict: 72%



Just some of the unusual backdrops you could have on your Workbench screen.

Magic Workbench Enhancer

Well, you aren't expecting to find anything on here that will radically alter the way you live you're life are you? Good, because you won't find it. You may find something that will change the way you look at your Amiga though, because this disc is crammed with all sorts of icons, backdrop patterns and utilities to support the rather excellent looking Magic Workbench.

As it would be a little difficult to fill an entire disc with different marbled textures, you will also find a huge array of Workbench utilities, hacks and tools, some of which follow the general Magic WB theme (like Iconian) and some of which don't (like the latest version of Term).

Strangely, a lot of the good pictures are hidden away in archives, and the organisation of some bits of the disc leave a bit to be desired. A thumbnail index for the pictures, and perhaps even the icons, would have been a great help.

Overall, there is a lot of fun to be had with all the icons and pictures, and certainly after a few days with this disc, your Workbench will be unrecognisable.

Magic WB Enhancer

Price: £17.99
Supplier: Epic Marketing
Contact: 01793 514188
Verdict: 86%

Scene Storm

This is not, as Graeme first suspected, a huge collection of Lightwave scenes, but it will cause a considerable amount of excitement amongst fans of the demo scene.

Amongst lots of other things you will find loads of disk magazines, slideshows, reports and demos from dozens of demo parties which have taken place throughout the world. Of course, there are also plenty of other demos here, loads of sound modules and even some useful source code.

One of the more bizarre items is a small collection of UFO pictures and text files, and I have to confess that after seeing them, I am convinced. Not in the existence of alien life forms, just convinced that there are a lot of very strange people around. I'm sorry, but aliens who travelled the stars in super-tech spacecraft would not have zip-up spacesuits – not with sad loop tags anyway.

But back to the demos. There is an impressive collection, and although some of them do not, as claimed, run directly from the disc, most that don't are worth the effort of installing onto disk anyway.

It is a bit of a shame that, for example, the main assign script asks for some strange volume and some of the icons don't seem to have been set up properly, but all in all, there is a lot for demo fans here. ■

Scene Storm

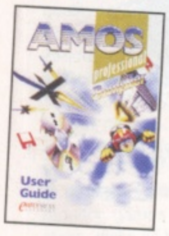
Price: £19.99
Supplier: Active Software
Contact: 01325 352260
Verdict: 80%



The Scene Storm CD contains loads of demos, sounds, diskmags and some great pictures too.

Mail order

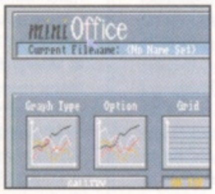
AMOS Pro Compiler 2



Speed up your AMOS programming with the AMOS Pro Compiler 2 from Europress, which F1 Licenceware have re-released for a limited period. If you want to know more about the program, we ran a review of it in the April 1996 issue, where we gave it a respectable 87 per cent.

Description	AMOS Pro Compiler 2
AS price	£14.99
Order code	AS/AM/1
Special subscribers price	£13.99

Mini Office



A collection of database, spreadsheet, graphics and word processor programs from Europress that you shouldn't be without. It can be especially useful if you are planning to set up a small business.

Description	Mini Office
AS price	£24.99
Order code	CB95
Special subscribers price	£22.99

Phase 1, 2 and 3

E.M.Computergraphic's excellent CDs are full of fonts, clipart and images. Save £4 off each CD or £15 when you buy all three!



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Order code	AS/PH/1
Special subscribers price	Pack of three £56.99
Special subscribers price	Per CD £19.99



Mega Mouse 2 and scanning pad

Broken your mouse? Why not replace it with the Mega Mouse 2. And our new pad will help make your scanning a doddle.

Description	Mega Mouse 2/scanning pad
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AS price	Scanning pad £6.99
Special subscribers price	Scanning pad £6.50
AS price	Mega Mouse 2 and scanning pad £14.99
Special subs price	Mega Mouse 2 and scanning pad £14.20
Order code	Mega Mouse 2 AFMM02
Order code	Scanning pad AFSP02

Turbotech Clock Cartridge



Your Amiga will always know what day it is with this handy device – even when it's switched off! Once the software is installed, boot up and the time and date are already set. Fits into the disk drive port (or on the back of your second drive).

Description	Turbotech Clock Cartridge
RRP	£19.99
AS price	£17.99
Order code	ASCLO
Special subscribers price	£16.99

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● **RAM for sale.** 72-pin SIMMs, 4Mb, £60; 8Mb. £120 plus P&P. Phone Gordon on ☎ 01928 714651, or after 6pm on ☎ 01928 771483. No time wasters please and no offers.

● **Panasonic KXP2135 printer,** spare ribbon, £100; Viper accelerator 28MHz, 4Mb RAM, as new, £170; 12-inch multisync monitor, £100. Phone Chris on ☎ 01743 356430.

● **Star LC200 colour printer,** uprated chip, printer driver, ribbons, little use, as new, printer stand, £100. ☎ 01443 203022.

● **A600,** 2Mb with Transwrite, Pinball Dreams and Lemmings. Will sell for £200 ono. Bargain! Buyer collects. Phone Darren on ☎ 01703 327067 after 7pm. Also various other software for sale.

● **Amiga 1200,** 549Mb hard drive, 14-inch Microvitec colour monitor and stereo speakers, Blizzard 1220/4 turbo memory board, external disk drive, three mice, two joysticks, serious software, games, demos, books, utilities. Over 200 magazine Coverdisks. Worth over £1,200, sell for £900. Call Matthew on ☎ 01234 271022.

● **Amiga 1200** with colour monitor, printer and second disk drive, loads of games magazines and Easy AMOS, £350 ono. Call ☎ 01252 659494.

● **Amiga 500+,** 2Mb, WB 2.1, modulator, mouse, PSU, Workstation, GVP530 Turbo, 40MHz accelerator, 120Mb HD, DPaint 3, Final Writer 3, Penpal discs, mint condition, boxed, £350. ☎ 01443 203022.

● **Supra fax modem** for sale, v32 bis, 14.4kbits/sec, £70. Phone Mario on ☎ 01203 386947, evenings.

● **Overdrive external hard drive** for Amiga 1200/600, plus lots of PD software, 250Mb, £160. ☎ 01703 841952.

● **Emplant BASIC** with E5860X PC module including BIOS £180. Also various CDs, games and serious software. Write for list. Contact Martin McKenzie, 2 Wardie Road, Easterhouse, Glasgow G33 4NP.

● **Power PC1204,** 4Mb RAM expansion, £50. Call Phyllis ☎ 01349 882909, evenings.

● **Apollo 1230** Lite accelerator with 4Mb, 28MHz 030 and FPU, plus SCSI-2 controller on board, £200. Hawk Trapdoor 4Mb expansion, £130. Both boxed. Phone Keith ☎ 01689 873979, after 7pm.

● **A500+ 2Mb RAM,** Cartoon Classics, original software, only used once in two years, everything perfectly wrapped and boxed, pristine condition, selling because moving abroad. Telephone ☎ 0141 776 1076, ask for John Bass.

● **Amiga 4000/040,** 6Mb RAM, 270Mb H/D full of games and utilities, extra internal HD disk drive, quad-speed CD-ROM, boxed, manuals, keys, as new, £1,199. ☎ 0181 679 8988.

● **A1200, 50MHz,** 68030 + MMU, 6Mb 32-bit RAM, FPU slot, spare SIMM slot, 250Mb internal HD (plus loads of software). Very good condition. Goliath PSU. Worth £1,100+, sell for £650 ono. Phil ☎ 0121 449 6975 E-mail:pxb@cs.bham.ac.uk.

● **Amiga 124** Commodore 10845 monitor, boxed, manuals, leads, disks, keyboard, £850. ☎ 01726 70506.

● **Amiga Video BackUp** v.3.0 and v1.5, store 150 disks to tape or back up HD, £25 P&P free. ☎ 0161 790 0962.

● **A1200,** 120Mb HD, still under warranty, Viper 68030 28MHz, 6Mb RAM, 68882 FPU, games, software, books, computer desk. Excellent condition. Worth over £1,100, bargain £500. Phone Rich on ☎ 0121 444 7605.

● **A1200,** only £199 post free, or £250 with 2.5-inch 120Mb hard drive. ☎ 01964 543592. Also Datel Micro MIDI cable, Music-X, £25. Boxed games (WB1.3), 10 for £25.

● **Music!** Datel Micro MIDI, plus cable, Music-X, disks and manual, £25. ☎ 01964 543592. 10 WB 3.1 + boxed games, £25; 200 disks (used). £199 = A1200, Wordworth, games, PPaint, etc.

● **Imagine 4,** brilliant! £75, save 25 per cent. Also LW3D at a bargain price. Call ☎ 01405 860798.

● **Accelerator,** GVP A1230 II, 40MHz 68030, 4Mb GVP RAM, £200. Zappo CD-ROM drive, dual speed, three CDs, £90. Phone Paul ☎ 01923 462008, or E-mail pawar@moose.co.uk.

● **Amiga 500** with WB3.0, GVP HD8+, 120Mb hard drive, 4Mb RAM and 240C Citizen colour printer, £200 the lot. Call ☎ 0141 639 1268, ask for John.

● **Amiga A1200,** 200Mb HD, 50MHz 030, 6Mb RAM, Goliath power supply, stereo colour monitor, original software, includes Datastore, SimCity 2000, £675 ono. Phil on Sheffield ☎ 0114 268 3393.

● **Alfapower A500** or A500+ controller with 425Mb, 3.5-inch drive, much software, pre installed, boxed with manual and installation disk, £180. Phone ☎ 01762 344641, ask for Bill.

● **Warp Engine** for all 4000s, 3-4x faster memory, four SIMM sockets, very fast SCSI-2 interface, complete fan. SCSI lead, manual, software, only £549 with, 8Mb £449 without. ☎ 0181 679 8988.

● **Amiga 1200** with two disk boxes full of games, also three joysticks, £250. Call ☎ (Lincoln) 575242.

● **Wordworth 3** word processor with many scalable fonts. Boxed, in excellent condition. Needs WB2, 2Mb and HD, or two floppies. £25 ono. Phone ☎ 01361 810268.

● **Amiga 1200,** 540Mb HD, Microvitec 1438 colour monitor, speakers, Blizzard, 4Mb second disk drive, Citizen Swift 200C colour printer, games, demos, books, utilities, three mice, two joysticks, over 200 Coverdisks. Worth over £1,300, sell for £900. Phone ☎ 01234 271022.

● **Magazine Coverdisks** for sale or swap. AF, AC, AS, AUI, CU Amiga, AP, Amiga Action. Used DS/DD (old Coverdisks, old software, PD disks). Offers please. David ☎ 01904 624637.

● **Amitek external floppy drive** £25; A1200 PSU (lightweight), £20; Amiga to SCART lead, £5; SCART switch box (two-way), £10; RF lead (no audio), £5. Phone David on ☎ 01904 624637.

● **A1500,** 8Mb RAM, 030, 2Mb Picasso, 2x 120Mb hard drives, 1084 monitor, Star printer, loads of software, especially Imagine, objects, textures, etc... £700 ono. Call Chris after 7pm. ☎ 01509 646716.

● **DTV software:** Videotitler 3D plus Lights! Camera! Action! Presentation, original disks and manuals, £15; TV Text Pro magazine disks official manual, £5, plus P&P. Call George Aldridge on ☎ 01573 224632 any time.
SIMMs, 72-pin, 4x1Mb, £60 for four. Phone ☎ 01265 321404 any time.

● **Amiga 500+** 1Mb RAM, some software, £80 ono. Call Ian ☎ 01753 662426.

● **SCSI CD-ROM,** Toshiba model, 4101B internal, two-speed with audio output, as new, two available, 1200

compatible, £50 each plus £5 COD KS2.04 upgrade chip, £15 plus COD. ☎ 01782 334827.

● **Amiga 4000/040** 2+4Mb Microvitec 1440, 28MHz Warp Engine, 1.0Gb SCSI-2 HD, 4xspeed Toshiba SCSI-2 CD-ROM, Picasso II, wave tools, 16-bit sampler, cost £4,000+, sell for £1,900. Call ☎ 01844 212325.

● **Complete DTV** system: A1200 HD, Rendale 8802FMC genlock, Rocgen RGB Chromakey Scala 500, quality titling software, DPaint Vidi 12 video digitiser, Music-X MIDI sequencer, £500. ☎ 0171 278 3572.

● **Amiga 1200,** 4Mb RAM exp., 50MHz FPU, 420Mb HD, 24-pin colour printer, modem, games, software, accessories, etc. Only £700. Phone ☎ 0141 563 2521, ask for Pally.

● **Amiga 1200,** 175Mb drive, colour monitor, games and office software disks, disks all boxed, all cables, manuals, handheld greyscale scanner, Commodore 64/128 transfer system,. £305 ono. ☎ 01582 595467, evenings or weekend.

● **Citizen** 24-pin colour option dot matrix printer, suit Amiga or PC, all cables and manuals. £175 ono. ☎ 01582 595467, evenings or weekend.

● **Amiga 4000/030,** 6Mb RAM, 40MHz FPU, 250Mb HD, 1942 monitor, Opalvision 24-bit board, £1,100 ono. Call ☎ 01763 208032.

● **4000 040,** 340Mb HD, Microvitec 1438 14Mb RAM, PageStream 3, AMOS, Devpac 3, Blitz v2, Multiface card, extra fast port for printer, games, books, disks, b/w scanner, £2,000 ono. Nicholas ☎ 01709 700255.

● **Memory for Amiga 500,** 2Mb unit with thru port and disabling switch. Plugs into side expansion port. Perfect condition, £50. ☎ 01536 513406 (Northants).

● **Hilsea Lido** £9.99, Sim City 2000 £15, AMOS Pro £15, Gloom £12, Roadkill AGA £10, Tornado AGA £10. Contact Dave Hogben at 128 Gaston Way, Shepperton, Middx. TW17 8ES.

● **A1500,** WB2.05, GVP 030 qith 5Mbs Fast RAM, sngle speed internal CD-ROM drive, 170Mb hard drive, Power 1.7Mb internal high density floppy. £45 ono. Also software for sale. Call Chris ☎ 01260 276866.

WANTED

● **A1200** with HD. Will trade PC games – loads of new CD-ROMs! Call Mark on ☎ 0117 968 4481.

● **Amiga CDs and hardware.** Please send lists and prices to: B. Goodwin, 6 Peter Street, Whitehaven, Cumbria CA28 7QB.

● **Roland TB-303,** Novation Bassstation and other "Acid" type samples (IFF) needed. Also any MED (Octa) modules. Cheers! Postage paid and all disks returned. Barry Best, 91a Plungington Road, Preston, Lancashire PR1 7UE.

● **AMOS contacts,** for new user group. Friendly, experienced advice for beginners to experts. To swap programs and ideas. Contact Will, 52 Saint Oswalds Road, York YO1 4PF.

● **Keyboard for A4000,** no A3000 keyboards– must be white and in perfect condition. Can P/X my A3000 keyboard if required. Phone Dave on ☎ 01253 595300, or ☎ 01253 691082.

● **I'm looking for RPGs,** adventures, wargames, even old ones. In particular SSI's AD&D series (Pool Of Radiance, etc.). Send list to: Andrea Campanini, Via Fratelli Rosselli, 45, 47100 Forli, Italy.

● **GVP A530** HD/accelerator wanted. Any spec, any condition, even broken! Call Keith on ☎ 01567 820816 now!

● **Wanted:** Workbench 3.0 OS. Write to: Marcus Lord, 60 Bedford Avenue, High Crompton, Shaw, Oldham, Lancs. OL2 7DW. ☎ 01706 840116 between 5pm-6pm. All week.

● **Wanted:** Powerscan 4 colour, or Epson flatbed, ProGrab 24RT and must be latest version, A1200 Blizzard 030 accelerator, with or without RAM. Call Paul before 5pm on ☎ 0113 255 5585.

● **A2000**/3000/4000 keyboard, reasonable price paid. Any condition considered. ☎ 01203 675299.

● **Wanted:** ADI Junior reading 4/5 6/7. Please write to: Randall, 107 Hornhill Road, Maple Cross, Rickmansworth, Herts WD3 2TG.

● **A3640 040** daughterboard to upgrade 4000/030 to 040CPU. Cash waiting for your chance to upgrade. Call David ☎ 01247 274408.

● **Amiga 500** users from anywhere as contacts or would sell or swap. Lend me an operating manual for the Zappo SCSI 3.5-inch.

Warning

No trade advertising will be accepted for this section. Some people are still trying to sneak them in and we will weed out any we find. This includes PD advertising.

We will also remove any that appear of dubious legality. Pirated software is illegal and sales within these pages will not be tolerated.

Please do not attempt to abuse this reader service.

PERSONAL

● **Pentrisoft,** the programmers' user group. Advice, contacts, distribution for all languages, at all levels. Free membership. Write to: Mark Harman, 3 Highlea Close, St. Leonards-On-Sea, East Sussex TN37 7SS.

● **Imagine BBS,** bringing you the best in Amiga software 24 hours a day! 28K, ☎ 01772 435150. Over 1,000 files on-line, mail networks, games. Don't delay, call today!

● **Amiga contacts** wanted. PD, swapping, etc. Contact Steven, 225 Trowell Road, Wollaton, Notts NG8 2EP.

● **Pen pals** wanted to swap games, software and tips for Amiga 1200. Send your lists to: Zoe Green, 35 Constantine Place, Baldock, Hertfordshire SG7 6ST.

● **Want to get** more from Blitz BASIC? Write to: Blitz, M. Tillet, 27 Hillside Avenue, Worlingham, Beccles, Suffolk NR34 7AJ. Monthly magazine printed on paper.

FANZINES/BBSs

● **Guru medication,** BBSI, Fido, Aminet. Over 1,000+ files on-line. Speeds up to 14,400. Fido points available free of charge. Call ☎ 0181 401 2502, 24 hours. Node 2 from May 1996.

● **Visions**. A new SF/fantasy/horror fanzine (printed) needs fiction and artwork for issue one. Send S.A.E. for full details to: S. Kennedy, 41 Larwood, Worksop, Notts S81 0HH.

● **No Limits BBS** 01293 413668, v34+, 1.2Gb, Xendrix Pro software, very friendly SysOp, free call to other Eurobell subscribers, complete Fidonet backbone, many other networks, perfect for points. Binarynet HQ!

● **Echoes BBS**, Camberley, Fidonet, Sportsnet, plus many more. Always the latest Aminet CD-ROM online. Free pointing all networks, Xenolink Pro software, friendly, helpful SysOp. All welcome, 24 hours 01276 62099.

● **Entity** is a new diskmag that aims to keep Amiga alive by getting you creating. Issue one and two ready. Contact: Jono, 25 Denness Place, Llandudno LL30 2UX, for more info.

● **New Amiga** diskmag. £2 for two disks on AMOS, Imagine, PD and more. Jono, 25 Denness Place, Llandudno, Gwynedd, Wales LL30 2UX.

● **Mogsy's BBS.** Contact Anthony Morris on ☎ 01772 496590. Amiga only! Over 1,000 files on-line and CDs to choose from! Speeds 2400 to 28,800. 24 hours. Call today!

● **Black Magic BBS.** Online midnight till breakfast. 14400, full graphic (IFF) adventure game with sound. Online soon! It's a new BBS so spread the word. ☎ 01482 473458. ■

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Amiga answers

Views on video



I'd like to put some intros, demos and parts of games onto video. I've tried to connect my Philips' monitor cable with SCART connection into my VHS VCR, without results. Can I connect my A2000 directly to my VCR? If so, what is the wiring diagram to ensure I have sound and vision?

R. Danker, Hansweert, Holland

Mono output, modulator, genlock (plus sound o/ps). You can connect an A2000 directly to your VCR but you'll only get a mono picture because the only video output you can connect from is the A2000's composite video output. Although the Amiga has an RGB output, and your SCART wiring diagram shows it has RGB connections, your VCR will still be incapable of recording it. It is better to connect a modulator or genlock to the Amiga's RGB port. Both a genlock and a modulator will convert the Amiga's RGB video output into a signal which can be recorded by your VCR. A modulator will also have an audio output, but if you use a genlock you'll need to connect the Amiga's audio outputs and the VCR as well. Genlocks usually offer better output quality and more features (graphics superimposition over video, etc) than modulators but are more expensive. But a modulator may be all that's needed.

Some demos may not transfer to video as they can sometimes illegally affect the Amiga's internal video hardware to achieve their effects.

Gary

That syncing feeling



Every time I boot my A1200 with the newly acquired monitor, a Taxan 580 Plus, switched on I receive no picture at the end of the startup-sequence. I have to switch off the monitor manually and then back on again to get a picture. And the same thing happens every time I reboot. I have tried altering the screen mode preference settings and then rebooting – all to no avail. I have also tried the Power Computing VGA adaptor pin assignments and all the wires seem to be soldered well and in their correct places. I also checked the connection of the pins.

David Perry, Stoke on Trent

When the Amiga is switched on and in the process of booting up, it is by default sending out a PAL signal. This 15kHz signal seems to be confusing the monitor to the extent that even when a more friendly video signal comes along it cannot re-sync and display an image. Instead it needs to be started from scratch. This is one of those "features" which you'll sadly have to live with. If you had a big box Amiga and not an A1200, the video output from a graphics card, flicker-fixer or scandoubler card would

The experts at hand to help you...



Whenever you try out something different with your Amiga, or buy a new piece of kit, you might come across problems that you don't know how to solve. That's what these pages are here for – to guide you through your difficulties and get you using and enjoying your machine to the full. We've got a great group of experts to hand with their own in-depth knowledge in special Amiga areas. So put them to the test, and send your queries in.



Paul Overaa is our Operating Systems programming expert. He has written several books, including: Mastering Amiga Assembler, Mastering Amiga ARexx and Mastering Amiga C. When he's not drinking red wine or wind surfing, Paul can be found making music and designing programs on his Amiga.



Gary Whiteley is our expert on video and graphics. He regularly produces work for films and TV. Gary has also written several books on his favourite subjects – among them is Amiga Desktop Video, published by Future Publishing (call ☎ 01225 822511 to order a copy). Gary also regularly reviews new products for Amiga Shopper.



John Kennedy is our hardware and music expert. He has written Supertests and features alike for Amiga Shopper in the past – this month he's put together the accelerators Supertest starting on page 16. He's also teaching everything you need to know about CanDo on page 46, and he previews a brand new program – Octamed Studio – on page 25.



Larry Hickmott is our DTP and word processing expert. He produces his own DTP magazine called Em and has written several books, including *The Wordworth Companion* for Digita and Future Publishing's books division.

Answers contents

If you're looking for a particular problem, this handy index will help you find the answers you need:

solve the problem (albeit in an expensive way). But there isn't a lot you can do except to get into the habit of switching on the monitor after the Amiga has finished booting. You may want to experiment with a utility program such as PicBoot which displays a picture early on in the startup-sequence: this might reduce the time you spend waiting. Check also that you have the VGAOnly driver present in the Workbench drawer "Monitors" (it is inside "Devs").

John

DesignJet for The Amiga

I want to buy two Hewlett-Packard plotters, the DesignJet 230 and the DesignJet 250C. But I cannot find a Workbench printer driver for this printer and Hewlett-Packard were unable to help me. I also tried to get help from some PD libraries without luck.

Paul Grey
Swansea

I checked out an Aminet site in the UK, then a list of printers supported by a popular printing enhancement package and also various other printer driver disks. On none of these is a DesignJet driver. That isn't to say one doesn't



ProDraw 3 is the only program I know of that supports Hewlett-Packard plotters. Maybe other readers can fill us in on other Amiga programs that have this option?

exist, as someone may have produced one but not released it for general use. If any reader knows of one, please write in.

Hewlett-Packard told me you need a special vector based driver that supports the HP-GL plotter language. Although no general printer driver came to mind, it did remind me of a print mode in Professional Draw 3 which supports HP-GL commands. These are bound to be basic compared to the commands now used by modern DesignJets, but may be of some use to you. If a program like ProDraw supports plotters, you may well find other programs do as well. The favourites I would expect for this, would be CAD type programs.

Larry

The good old 1960s

Could you possibly advise where we can get repair information (such as a service manual) for the Commodore 1960 multiscan monitor? We have tried CPC, but to no avail. It's a pity to let a good monitor die!

Vic Truman,
Nottinghamshire

As my trusty 1960 monitor has also given up the ghost (thanks to a rather nasty video signal from a PC – serves me right) I, too, have been looking for service information. My first guess would have been CPC as they used to stock a wide range of Commodore and Amiga spares. Perhaps an Amiga Shopper reader can come to the rescue once more?

John

Murky Colours

I have a problem concerning colour printing quality. I am using a KXP-135 24-pin colour printer with an Amiga 600. I was told that this printer is one of the better printers on the market, but it seems as if I have wasted my money as I now don't bother printing colour pictures. Could you advise me on what settings I should be using and also what printer driver is best? If not, is there anyone out there who could help me as I think I've bought a white elephant.

Paul Mackel,
Tyne & Wear

Looking at your sample printouts, the problem is quite clear. Printing using a new ribbon, will usually result in colours which are nice and clean but as you continue to use that ribbon, the colours on the paper become dirty as the colours on the ribbon become contaminated. Take a close look at your ribbon, especially the yellow strip, and you will see smudging on tit.

This is something that all pin printers suffer from and is one reason why the colour ink-jet has proved so popular. With an ink-jet, each time you print, the colour is fresh and unmarked from contamination with other colours. This is just one reason why colours from an ink jet printer are so much stronger and vibrant than those from pin printers. The printer driver you use is not going to improve the contamination you get on the ribbon.

Using a better print driver will, however, give you better control over the way the dots are placed on the page, and therefore produce pictures that are not so dark. Looking at printers supported by various packages, though, I can't see any that mention your printer. This makes me think that maybe what you are getting is as good as it's going to get.

Anyone looking to buy a colour printer, and wanting near photographic output with colours that resemble those on-screen, really does need to look at ink-jets such as the Epson Colour Stylus, the Canon BJC-610, and so on. Not only are they very good printers, but there are many printer drivers and print enhancements packages for them.

Pin printers are now a dying breed, used mainly for specialist tasks when an impact type print head is required or where a person's budget can't meet the cost of an ink-jet. I wouldn't recommend a pin printer if print quality is what you are after.

Don't just believe what you hear though. Do your homework by looking at the printing enhancement packages like Studio and TurboPrint and see what printers they support. That should give you an idea of what printers are fully supported on the Amiga and what aren't. Both do not seem to support your printer although they may still work with it. Why not test your printer with the TurboPrint Coverdisk which came with Amiga Shopper issue 61?

Larry

Multiple Questions

A. How can I import a graphics chart from Final Calc to Final Writer version 4 other than in IFF-Format? Final Calc can save the graph as a PostScript file, but Final Writer does not recognise it.

B. When I try to open a large image in ImageFX 2, although I have virtual memory of 200Mb, ImageFX reports an 'Out Of Memory' message. How can I solve this problem, because as you know in DTP we use large size image files?

C. I can't use Magic Menu with Final Writer v4.

Theodoropoulos Kostas
Greece

A. *Final Calc cannot export graphs as EPS files, necessary for use in Final Writer and other programs. So says Softwood technical support in the UK. With careful use, coloured illustrations such as graphs that are in a bitmap format such as IFF-ILBM, can be printed without any jagged edges. Though I understand that this does put limitations on what you can do with the graphs and I can only advise you to write to Softwood US and ask for this feature to be implemented.*

B. *Although ImageFX supports virtual memory, I would not recommend relying on it. Not only does it slow down the program and operations within it, it is not uncommon for images to become corrupted when spooled to disk. Then you risk damaging your hard drive if your machine crashes while the program is writing data to the hard drive.*

My advice is to use the virtual memory option only when you have to and even then, not to rely on it. Try adding much more memory to your Amiga for dealing with high resolution images. With RAM having come down in price, now is a good time to buy. Not only will ImageFX be happier, but other programs will run better with more free memory to play with.

Most high end DTP workstations working with images 2,000 x 3,000 pixels, would have at least 24Mb of memory even if virtual memory is present.

▶ 38

C. *Final Writer 4 does not like Magic Menu. Softwood technical support in the UK say you should avoid using the two together. Version 2 of Magic Menu is supposedly better, although this has not been confirmed by Softwood.*

Larry

No Printer Under 3.1



Since upgrading from Workbench 2.04 to 3.1, I have not been able to use my printer. I have installed the Generic printer driver into the Devs/Printer drawer. When I try to print, I get the message, "Printer Trouble, Check Cabling and Printer". I use Protext and ProData.

K Wynn
(address not supplied)

To test your parallel port, use the Shell and the Type command to print a text file to your printer. To do this, create a file with some text and save it to disk. Then type into the Shell:

```
Type FROM Filename TO Par:
```

where Filename is the name of your text file. This will dump the text file down the parallel port to the printer. If all is well, the printer should work. Try printing again normally, and if your Amiga still won't print, try reinstalling Workbench. Another check to make is to ensure the file, "printer.device" is in the Devs drawer. Also make sure you haven't installed a program that is using the printer.device preventing other programs from accessing it. Check the PD utilities you're using. If all else fails, consider sending it to a repair shop.

Larry

DICE C



I have Dice v 3.01 installed on my hard disk in a dh1: directory called DICE. Both the 2.0 and 3.0 includes are present in the include directory and if the compiler looks for a header in 3.0 (eg, datatypes) it can't find it. I think that this is because it looks in 2.0 only and to avoid this I've set up these two assigns:

```
assign dinclude "amiga2.0" "amiga3.0" add
```

Is there any way around this? I'm also having trouble compiling examples from MUI v3.1!

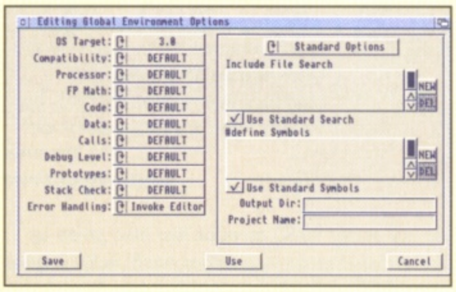
D Bateman
(address not supplied)

You don't need to use both the 2.0 and 3.0 headers. Use the 3.0 forms and to get Dice to do this just select OS Target 3.0 in the VOpts settings window. This causes a −3.0 entry to be set in the dccopts environment variable which in turn causes a "dinclude:amiga3.0/ " include file path to be set up and the appropriate includes located automatically.

On the occasions where you want to create programs that run under 2.0 as well just restrict yourself to using only those library functions that were available with Release 2 of the O/S. Occasionally, when you want the 2.0 headers used (perhaps when working on code originally written using the 2.0 include definitions) just change the Target O/S setting to 2.0!

If you really want both sets of headers searched then set the VOpts Target OS setting to 2.0 and add an entry for the 3.0 headers in the Include File Search options. Any file references not resolved within the 2.0 header file set are searched for in the 3.0 includes. But this is not a good idea because if you think about how the files are searched, you'll see it is tantamount to using one set of include files that is a mixture of both 2.0 and 3.0 headers. I can't help with your MUI problems I'm afraid – I've not seen the code you mention!

Paul



Dice's include file compiler options are best set directly from the VOpts utility.

Amstrad and the Amiga



I've seen a printer (Amstrad DMP 3160) and would like to know if it's compatible with an Amiga 1200, and if so, which printer driver I should use.

Roger Parkinson
(address not supplied)

It's unlikely there is a dedicated Amiga printer driver for that printer, but check the printer's manual to find out what emulations it is capable of, and you may find an emulation that will work with the Amiga. Many ink-jets can emulate the Hewlett-Packard DeskJet series, for example, and so you can use an Amiga DeskJet driver with them. Likewise with many pin printers, where Epson emulation is popular.

Personally, I would steer clear of any printer which doesn't have a dedicated Amiga driver. This is because, although you may be able to use it under emulation, there may be features for that printer that are not usable under emulation and therefore you won't be getting the best from it. Stick to well known brands like the Hewlett-Packard series of ink-jets and lasers or the range of printers from Canon and Epson.

Larry

Version Crashes



Every time I use DOS or DOPUS to find out the version of the mathieeedoubbas library my machine Gurus. I found this out when trying to discover why two of my spreadsheet programs (Analyse! and Maxiplan) hang up or refuse to carry out simple calculations in some cells but not others.

If I boot from my original Workbench 3 master disk I can find out that it, and my hard drive libs directory, have mathieeedoubbas library version 38.2. Using SnoopDos I have identified that VirusChecker and Maxiplan both call for the mathieeedoubbas library, but the version that gets loaded into memory, according to SysInfo, is version 38.1 not 38.2.

I thought I had cracked it and that the library is resident in the ROM. Hence I deleted the mathieeedoubbas library from my hard drive libs directory. Virus checker appeared to work satisfactorily with version 38.1 showing in SysInfo. But Maxiplan refused to load and gave a message saying it could not find the mathieeedoubbas library. So where did Virus checker get v38.1 from and why can't Maxiplan use it if it is already in use by Virus Checker?

If I copy the mathieeedoubbas library back to the libs directory, Maxiplan loads and runs OK but v38.1 still shows in SysInfo and I'm back to where I started with occasional Gurus, etc. I have thoroughly checked all my hard drive directories and files to ensure that no add-hoc copy of v38.1 is lurking around. My startup sequence is identical to the original Workbench 3 apart from a line added by MagicWorkbench. My user startup has some assigns and aliases but I have prevented both this, and WBStartup, from being executed during startup to no avail.

It may be possible that v38.1 is resident in the ROM chip, but that Maxiplan, being an old program, is not compatible with Workbench 3 and needs it in the libs directory, but that still wouldn't explain why the version command causes a Guru, presumably due to two versions 38.1 and 38.2 being available from somewhere.

Unfortunately I do not have a copy of v38.1 or I could try copying this to the libs directory and perhaps resolve the conflict that way, but then wouldn't that mean that future library versions could also not be used?

Keith L. Richards
Tockington, Bristol

The mathieeedoubbas library isn't in ROM and there will not be two versions of this library in your system. But there is a problem which causes the Version command to crash when the mathieeedoubbas library is the target. Both my A4000 and A1200 behave in the same way as your machine and I've had no sensible answers from Amiga Technologies about why. Either the Version command has a bug in it or, as I think more likely, the mathieeedoubbas library has some anomaly in its structure.

Ignore anything that SnoopDos says about library versions – it doesn't mean anything. When a program makes an exec OpenLibrary() call it provides an integer version number as one of the parameters. Providing the library being opened has a version number equal to or higher than the one specified in OpenLibrary(), then the exec function succeeds, ie the library gets opened.

When monitoring the OpenLibrary function using SnoopDos you are not being provided with the library version number as such – you are just being given the minimum allowable version number that was specified when the OpenLibrary() call was made. But SysInfo, gets version information directly from libraries present in memory (it searches the system lists). I have no knowledge of the internal layout of the mathieeedoubbas library itself, but these system libraries have standardised identity information including version and revision numbers stored internally in the library module. There is also a separately embedded text string giving the library name, a combined

version/revision number and a creation date. This means that, in theory, there are two possible sources of version/revision number information within any library. Having experimented, however, it's clear that SysInfo always reads and displays the individual version and revision numbers and takes no notice of the embedded text string contents.

Things are slightly different when the Version command is used. If the library being examined isn't currently present in memory then the Version command gets its version details from the library's embedded text string. As soon as a library has been opened once and is present in memory, the Version command uses the same individual version and revision numbers that SysInfo uses. The version 38.2 that you get displayed by using Version to examine your original Workbench disk then suggests that the library's embedded text string information specifies this version number. In theory, both sets of version/revision details present in a library should be kept in line automatically, but although there are system macros available for this, their use is not mandatory. Coders often handcraft all version and revision information and my guess is that this is what has happened with the mathieeedoubbas library and, for some reason, the two sources of version/revision information have simply become out of sync.

In short – the two different version numbers you see are coming from the same library. Once a library has been used it will hang around in memory (unless memory is tight). This explains why you saw the mathieeedoubbas library details in the SysInfo display after you had deleted the disk version of the library. It's possible that VirusChecker only briefly opens and closes the mathieedoubbas library and that the attempted loading of Maxiplan (a large program) then caused the library to be flushed. This might explain why Maxiplan was unable open the mathieedoubbas library.

Whether your other Analyse and Maxiplan problems stem from the mathieedoubbas library or not, and whether they are related to the Version command crashes, I've no idea. The only thing that is certain is that you must keep your (one and only) mathieeedoubbas library present in your libs: directory!

Paul

Double Drive Dilemma



Hardware

I am experienced in all aspects of the Amiga, but I am limited by my lack of cash. My current system has a Seagate 127Mb hard drive which is full, and I was recently given a 60Mb drive. I want to connect and use both 2.5inch drives at the same time. I have heard that there are incompatibility problems with the Conner drive. Is it possible to overcome them? Where could I buy a suitable lead? Also could you tell me how to configure the drives as Master and Slave? I intend to place my whole set-up inside a modified PC Tower case.

David Collingwood, Yarm, Cleveland.

Connecting two IDE drives to one A1200 or A600 is not recommended. The internal IDE interface is not buffered and may be damaged, and you may find you need a beefier power supply to provide enough juice. Also, chaining 2.5-inch drives is not easy. The 2.5-inch drives were designed for Notebook PCs where space is a real premium: no-one really thought that anyone would need more than one drive. For this reason, most 2.5-inch drives lack the necessary jumpers to select between Master and Slave, and so even if you could find a lead, they would not function together.

But 3.5-inch drives are designed for larger systems and all modern drives will support Master/Slave configurations. I once had a problem with a Seagate/Connor combination, which I solved by swapping the Master and Slave settings around. But since Seagate now own Connor, there shouldn't be any incompatibilities. Once again, using two drives in one machine is not recommended.

Instead I suggest you sell the 2.5-inch drives to A1200 or A600 owners who need to install a hard drive with minimum hassle. With the proceeds, buy the largest 3.5-inch drive you can afford – you should get close to 1Gb. Either squeeze the new drive into the A1200 (ask a company like Eyetech for instructions and cables) or mount it in your new tower case. By the way, have you solved the problem of using an external keyboard with the A1200? At the recent World of Amiga Show Micronik were selling such a device (☎ 00 49 2171724560).

John

Fill in and get answers to your questions AS64

If you send in a question for the Amiga Answers experts, please fill in and include the form below (or a photocopy if you don't want to cut up your magazine). If you have several questions in different fields that should be addressed to more than one of our experts, please send in your queries on separate forms.

Send your form and question to: Amiga Answers, Amiga Shopper, 30 Monmouth Street, Bath, Avon BA1 2BW.

Name: ______

Address: ______

______

______ **Post code** ______

Your machine:

☐ **A500** ☐ **A500 Plus** ☐ **A600** ☐ **A1000**
☐ **A1200** ☐ **A1500** ☐ **A2000** ☐ **A3000**
☐ **A4000**

Approximate age of machine: ______

Kickstart version (displayed at the "insert Workbench" prompt)

☐ **1.2** ☐ **1.3** ☐ **2.x** ☐ **3.x**

Workbench revision (written on the Workbench disk)

☐ **1.2** ☐ **1.3** ☐ **1.3.2** ☐ **2.04/2.05**
☐ **2.1** ☐ **3.0**

PCB revision (if known). Do not take your machine apart just to look for this! ______

Total memory fitted (see AVAIL in Shell for Workbench 1.3) ______

Chip memory available (see AVAIL in Shell) ______

Agnus chip (if known) ______

Extra drive #1 (3.5in/5.25in) as DF : Manufacturer ______

Extra drive #2 (3.5in/5.25in) as DF : Manufacturer ______

Hard disk: ______ **Mb as DH** ______ **:**

Manufacturer ______

Extra RAM fitted – type, size in Mb and manufacturer ______

Please indicate details of any other hardware which could help us to answer your question:

______

Now, use this space to describe your problem, including as much relevant information as possible. Please continue on a separate sheet if necessary.

______



Create documents with AmigaGuide

Design your own documents for easy reading with Workbench's AmigaGuide

AmigaGuide is an incredibly powerful document system which has been part of the Workbench since version 2.04. In many ways AmigaGuide is like the World Wide Web language HTML.

It consists of a set of tags embedded in a plain text document, and the tags control the appearance of the text and define links. The links add a 'hypertext' element to the document, as it enables the reader to click on a highlighted word and jump to a new page. For example, click on a word and up pops a description. The power of AmigaGuide should not be under estimated. If you want to see how useful it can be, check out the Aminet CD-ROMs which create AmigaGuide documents on the fly to provide an easy to use way of locating files.

AmigaGuide DIY

In AS62 how to create a basic AmigaGuide file. Now we'll look a little more at designing and creating documents. When writing a lengthy AmigaGuide document, it pays to sit down and plan it out before starting. Remember that the object is to make it as easy for the reader as possible – it's not to create a kind of text-based adventure game.

Advanced use

Using AmigaGuide is not hard, and it's actually quite fun creating documents in this way once you get the hang of it. Advanced users can build support for AmigaGuide into their own programs – when the user presses the Help key, up pops the AmigaGuide help. For an example of how to achieve this using C, see the file called 'SimpleGuide' on Aminet. For more AmigaGuide documentation, get the file called 'amigaguidedocs.lha' from Aminet (or a PD library or BBS of course).

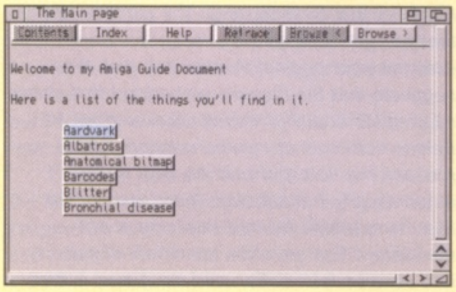
When you start reading up on AmigaGuide you'll discover that there are actally two versions available. The new version fixes a few bugs, and adds a few new features so look out for it.

Remember the key to making an AmigaGuide document which can be launched from the Workbench is to use a Project icon which has the default tool defined as "AmigaGuide" or "Multiview".



***Step1:** A guide AmigaGuide document will have an introduction and contents page as the first (the main) node. When the reader moves away from this page, the CONTENTS box at the top of the AmigaGuide display can be clicked to return to it. This is why it is important to make this a well-designed and efficient page.*

***Step2:** The main body of AmigaGuide pages should provide information in a concise and accurate way. Don't go overboard, stick to the facts. If you use a term which the reader may not be familiar with, make it a link to a page which defines it. Include cross-references when necessary. However, try not to make the links obtrusive. Don't say 'Click here for explanation of Fish'. Instead, make the first occurrence of the word 'Fish' a link and let the reader decide if they want to follow the link.*

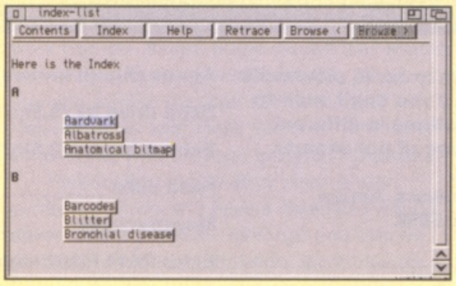


***Step3:** Defining an Index is not hard. You need to include an extra line at the start of the document, like this: @Index index-node. This informs the AmigaGuide system that this is an Index page, and it is associated with the node called 'index-node'. You can, of course, call it whatever you like.*

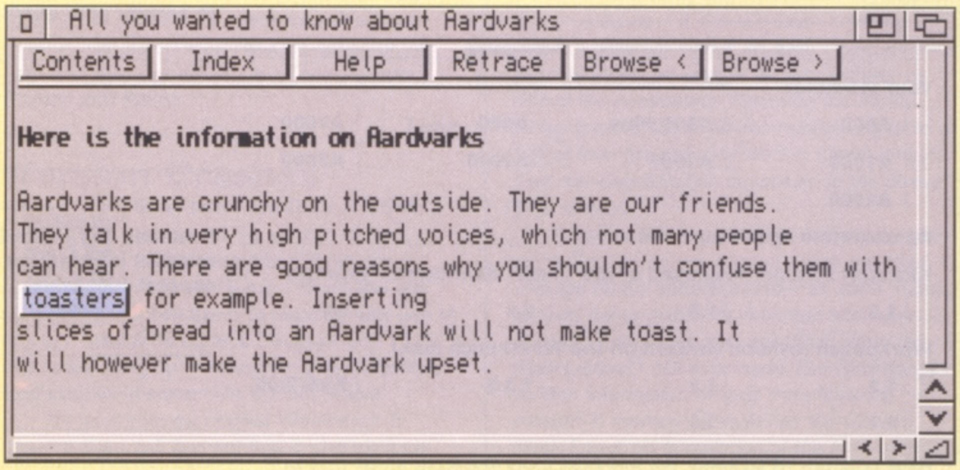
At another location in the document, you will need to define the index node in detail. Here is mine as an example:

```
@node index-list "An index"
Here is the Index
    @{b}A@{ub}
    @{"Aardvark" link aardvark-node}
    @{"Albatross" link albatross-node}
    @{"Anatomical bitmap" link anatomical-node}

    @{b}B@{ub}
    @{"Barcodes" link barcodes-node}
    @{"Blitter" link blitter-node}
    @{"Bronchial disease" link bronch-node}
@endnode
```



You can see how each item in the index (not including the letters) are actually links to other nodes in the documents. This makes it easy to hop directly to the page of interest.



***Step4:** With a large document, make an Index. You'll notice that there is a button marked Index at the top of the screen. When an index node is defined, this will jump immediately to this screen. For example, if your document is all about Fish, the Index screen could provide an alphabetical list of all the different subjects and Fish included. The list would also be a link, and so provide the reader for a quick way to locate a particular subject.*



Build an LCD

Easy guide to interface and control a Liquid Crystal Display to your Amiga

One of the enchantments of 'relic' computers like the Commodore 64 is, of course, their low prices and therefore their replaceability if anything should go wrong. That's why hardware fanatics have always been interested in interfacing the most arcane things to their various expansion ports. Here's one such opportunity.

Although the current Amiga series is far from easy to repair, my ownership of a Multifacecard II has strengthened my confidence enough to implement this quick project. All electronics-illiterate Amiga-owners needn't skip to the next article, though! This hack involves minimal electronics-knowledge, since the only hardware involved is connecting some wires, the right way, to a parallel port connector – which isn't difficult.

But before we start building the circuit, it makes sense to tell you what it's all about. This project is a way to interface and control a liquid crystal display to your Amiga. Not an LCD as you know it from laptops, but rather the ones you find as little status displays in all kinds of consumer electronics nowadays, varying from laser printers to cashpoint machines. They have from one to four lines of text and each line can have up to 40 characters on it.

So what's the point of building such a little display, that can't even hold graphics, when you have a monitor that does all that? Well, I use mine as a status monitor, constantly showing the date, time and available Chip and Fast memory. More interesting applications might be a system load indicator or a debugger. And, of course, to poke the eyes out of passing owners of Intel-based arrogant operating systems (not literally though, please).

How to build it

Now to the fun part: how do I build it and what will it look like when I'm done? On the pictures, shown to the right, you can see my A4000, with a two line 20-character LCD installed in the 51/4-inch drive bay. It has backlighting to ensure a great visibility. The previous model I built is portrayed in the picture above. It connects to the end of a standard printer cable and features 16 characters on two lines, but with no backlighting, due to its high power demand. Never try to draw power for backlighting out of your parallel port! For all those who are now on the verge of building this device, but wonder how it would actually behave, there is some relief. There is a pseudo driver included that opens a window on your Workbench and emulates an LCD in it. This driver requires Kickstart 3.0 or higher.

Shop around

Now that you're finally convinced, let's see what's needed. The obvious part is the LCD module. These can be bought in electronics stores, and come as a pre-assembled module. You could choose to go for a 40-character, four line display worth over £100 when bought new. But the one built into my Amiga has 20 characters on two lines, with backlighting, and cost as little as £10. So it really pays off to have a look around, or to try and find a module in some old equipment somewhere.



The LCD showing the time and usage of memory.

If you want a backlighting type, be sure to enquire as to the type of backlighting. Some have LED backlighting, requiring the connection of 5 volts and ground, whereas others use electro-luminescent backlighting. These types require a special voltage inverter to produce a high-voltage AC. The backlighting circuit is completely separated from the actual LCD electronics, so you needn't worry about the high backlighting voltage. As I mentioned earlier, the backlighting often draws 100 times more power than the LCD itself, so don't try to feed it from your parallel port.

When you buy the LCD, make sure you get a data sheet with the pin descriptions of the connections. You'll need these to wire it properly to your parallel port. Various types have different pin outs, so it is vital to get this data right. The contrast control is optional. On both the LCDs I tried, the contrast was optimal when connected to ground. If contrast is poor, you can alter it by connecting an adjustable resister of ten kiloOhms between +5V and −5V (or ground) and tapping into a voltage in between.

Soft option

Three drivers (daemon programs) are included for the software. One is for the Amiga's parallel port, another for the Multifacecard II's second parallel port, and a third is the window-emulation driver I mentioned earlier. But if you own another card, feel free to use the included source code to write your own and link it to the base program. Or you could mail me the programmer's information that came with your card and I'll see what I can do. The daemon program opens two inter-task communication ports: one named 'LCD rendezvous'. This port allows the programmer to send commands that directly control the LCD. The port named 'LCDaemon' is a real ARexx port. This makes it easy to control the LCD from any application. You could for example program LightWave to display a message once the rendering has completed, thereby allowing you to switch off your monitor when rendering time-consuming animations.

If this article has whet your appetite, take a look in the LCDaemon drawer in the Technical Zone on this month's Coverdisk. You'll find information on the actual connections as well as some additional utilities. Don't forget to check out ResetIntercept (in the Utilities subdirectory); this can prevent invalidation of your hard disk. I can be reached at hpd@barco.be or my address is in the .guide file so please send me your comments and suggestions. Happy hacking! ■



Above:* *The prototype LCD built as an external unit for non-boxed Amigas.





Above:* *The completed Liquid Crystal Display (LCD) in place in my A4000.

Left:* *As you can see it makes your machine look very smart indeed.

Choice Domain

You don't have to spend a fortune to get your hands on great programs and utilities. From artwork to blankers and emulators to Workbench enhancers, they're in the PD. ***Steve Liddle*** *checks them out...*

To make sure you find out about everything on the Public Domain, as well as the usual selection of disks we've gone one step further this month and searched the Internet for an even wider choice of programs and utilities.

ArtWorks Clip Art (Trees)

This disk of clip art images of trees has been released by Roberta Smith DTP under Licence from ArtWorks. Roberta says the disk is not PD, but a commercial release. The packaging looks good and a printed booklet shows each clip art image with a reference number which allows you to quickly locate any image on the disk.

The quality of the images range from average to excellent, and for a disk that is only 58% full it's quite a lot to pay. However, if you want quality you have to pay for it, and if you want trees you know where to go.

Verdict: 75%

AMOS Blankers

This is a screen blanker written in AMOS and although it has a few limitations due to AMOS



If you like a nice herbaceous border, then you'll love this ArtWorks disk since it's full of trees. Green ones, mainly.

itself, it is quite effective. The main attraction of this disk is the fact that you can code your own blanker routines using AMOS. Simply write a small procedure, slot it into the supplied code and compile it. The blanker will even work on a stock A500. The main editor program gives all the usual blanker options such as 'Test' 'Set Delay' and 14 different blankers to play with.

Although the author has done the best he can, AMOS is the wrong language for this type of program. The program cannot blank the mouse pointer, doesn't multitask well with other AMOS programs, and mouse and joystick buttons are not detected, though movement is. You can live with this, but you shouldn't have to.

Verdict: 50%



AMOS is a difficult language to use for this type of application, and hence it doesn't quite work.

Workbench 95

This compilation disk from Pixel Digital has six programs on it which all attempt to improve the look and feel of your Workbench. To make use of most of these programs you will need at least OS2 and a hard drive.

Workbench 95. The main attraction of this compilation disk of Workbench 3 enhancements/patches. But WB95 has a lot of bugs, although AmigaDos looks great with a Windows 95 look.

ForcePens. Emulates Magic Workbench's palette, source code included.

PIP. Stands for 'Picture-In-Picture'. PIP draws a window of other intuition screens not currently in view. This is a really good program that will save you flipping from screen to screen. Say, for

Who, what, where, when, why, how...

Product	No of disks	Type of product	Price	Supplier	Contact	Verdict	Page
Artworks Clipart	one	Clipart	£7.99	Roberta Smith PD	0181-45516206	75%	42
AMOS Blankers	one	Utility	£7.50	S. Hargreaves	4 Moon St, Oldham OL9-6PW	50%	42
Shad-Art #3	three	Slideshow	£3.50	Pixel Digital PD	0151-2594017	90%	43
Workbench 95	one	Util collection	£1.50	Pixel Digital PD	0151-2594017	85%	42
Shareworld #6	two	Disk magazine	£1.50	Roberta Smith PD	0181-45516206	89%	43
Lottery Syndicate	one	Utility	90p	Roberta Smith PD	0181-45516206	64%	43
Picture This	one	Util Collection	90p	Roberta Smith PD	0181-45516206	70%	43
EmuCpc	one	Emulator	90p	Roberta Smith PD	0181-45516206	72%	43
Beginners Wb3	one	Tutorial	Disk&stamp	F1 Licenceware	01392-493580	90%	44
Guide To Blitz	two	Tutorial	£4.99	F1 Licenceware	01392-493580	90%	45
Sound & Anim Stn	two	Utility	£4.99	Horizon@Seasoft	01903-850378	82%	44
Big Top Fun	one	Education	£3.99	Horizon@Seasoft	01903-850378	61%	45
FileQuest	242k	Utility	src.doc.ic.ac.uk/Aminet/disk/misc/filequest10.lha			95%	45
HTMLess V1.1	9K	Utility	rc.doc.ic.ac.uk/Aminet/text/misc/HTMLess.lha			85%	45
Remail V1.1	25K	Utility	src.doc.ic.ac.uk/Aminet/comm/mail/remail.lha			88%	45

example you are rendering a picture in Imagine, you can go off and do some Workbench type things and at the same time see how your picture is doing in the background through PIP's window. Neat.

Taskbar. Windows 95 has a menu bar at the bottom of the screen called the Taskbar which allows you to switch between active programs. Taskbar is an emulation of this feature and is more than just a novelty – it is quite useful.

AStart. A rather nice looking menu bar that is still in development, but has many features and is worth a look. There are tons of options and everything is just a couple of mouse clicks away.

AWin 95. A Windows 95 taskbar emulator, similar in operation to Astart and Taskbar.

Verdict: 85%

Shad-Art #3

I am in awe of people who can draw almost photo-realistic images on their Amigas, while I have trouble drawing a straight line in DPaint. This three-disk set of pictures contains some outstanding artwork. See the screenshots below for two of my favourites.

The main theme of the disks are Ferraris, but there are other odds and ends. The disks require an AGA Amiga and are autobooting. You don't need me to tell you that the artist, Dez Hoyle, is extremely talented and I am sure he will be rewarded with commercial work as soon as word gets around. Good luck Dez.

Of course, these disks are in the PD mainly to promote Dez's talents so from a PD buyer's point of view the disks are just a collection of pictures to look at and admire and therefore of limited use, otherwise I could have given this set an even higher rating, damn.

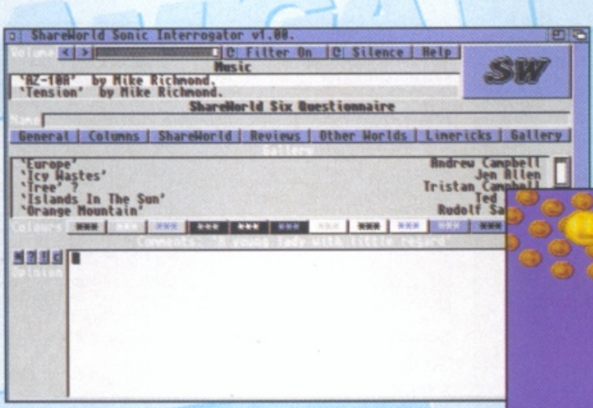
Verdict: 90% Star buy

CyberCraft Shareworld Volume #6

Shareworld is a disk magazine devoted to – you guessed it – Amiga Shareware and PD. There is a lot of editorial, as well as reviews, opinion, comment, programming tutorials, art gallery, stories, and so on. This issue comes on two disks and uses an antiquated magazine engine called Magnetic Pages, which was good in its day but is now showing its wrinkles.

However, Magnetic Pages works, in a clumsy sort of way, and only detracts slightly from the good content of the mag. The editor (Carl Reed) likes plenty of feedback from the mag and has even provided a nice GUI for filling out a response form. Worth a read.

Verdict: 89%



The Shareworld disk mag even has its own response program to send feedback to the editor.

Lottery Syndicate

This program allows you to keep track of a lottery syndicate. You input each person's name and ticket(s) and save them to disk. When the lottery result comes through, you input the winning numbers and the program picks out any winning tickets. Simple and straightforward.

The doc file on the disk uses 'Ed' as its default tool. When you attempt to read the doc you have to start chopping lines of text about so you can read them, what is wrong with 'More' or better still 'PPMore'? All said and done though, the program works and appears to be reliable. Chuck in the drawer with the other 5,000 Lottery programs that you must already have.

Verdict: 64%



Lottery syndicate isn't a state of the art program, but it does work.

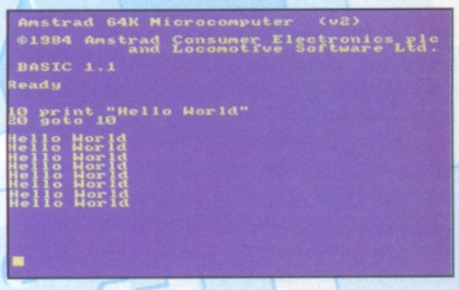
Picture This

This is a disk of PD picture utilities. There are four on the disk and they all require Workbench 3. The first is 'DTView' which is a small picture viewer that supports datatypes. Next up is 'QBistAmiga' which produces computer generated abstract art. 'Visage' is another picture viewer with an extensive list of extras like being able to set it up for use as a slideshow and a module for screen blankers. The last is 'V-Info' and allows the user to simply look at text and graphics through one of the worst front-ends I have seen. This disk contains an average set of utilities, but nothing much new and exciting is on here except maybe 'Visage'.

Verdict: 70%

EmuCpc

This is an Amstrad emulator. I tested it on a 4Mb A1200 and it is pretty slow, as you would expect. On a standard A1200 it is diabolical. You will need an accelerator to get anywhere near normal running speed of an Amstrad CPC



The good old bad old days of the 464, EmuCpc helps you relive them on your A1200 now!





Don't know what Dougal had his mind on doing...

Shard Art #3 contains some really stunning artwork, with Ferraris as the biggest theme.

The PD directory

On the disk

More details of names and addresses of PD companies, and how to get hold of PD software can be found in the PD Directory on the Coverdisk. It used to be printed within the magazine, but had to be in very small text because of the amount of information it contained. To solve this, we have updated and recompiled the list and put it on our Coverdisks as a text file in the InformationZone.

The InformationZone contains both the PD Directory and the list of User Groups (which also used to be in the issue). They are both in two formats, AmigaGuide and ASCII. The AmigaGuide enables you to point and click your way to the information, making it much easier to find the details you require. Read the ReadMe file for more information. See page 10 for details.

464 – I could buy loads of Amstrad 464s for half the price of an emulator. I know that isn't the real point of the exercise, but it is a thought.

On the disk there are a few games to play with, but I couldn't get the disk to run anything and believe me I tried. There is also a utility on the disk to convert Amstrad games to run on the emulator, but since I haven't seen an Amstrad game for years I couldn't test it out.

To test the emulator I resorted to typing in the 'Hello world' program and other nonsense. So, if you have a very fast Amiga and want to fiddle about with an Amstrad then EmuCpc may be of use to you.

Verdict: 72%

Absolute Beginners Guide To Workbench 3 Vol 1 (v 2)

A long-winded title indeed, but a descriptive one. You may remember this disk from an *Amiga Format* Coverdisk back in December 1995. The updated version has many improvements, mainly responding to feedback from users. It is now hard disk installable – just drag the floppy disk icon to your hard drive, or if you prefer you can still boot the disk. There are many textual enhancements in the main guide and odds and ends have been tidied up to make the disk very easy to use.

The tutorial is aimed at total beginners with A1200s and is free from F1 Licenceware – just send a disk and a stamp to F1 (see PD directory on Coverdisk). But the catch is that if you want the other four volumes they will cost you £3.99 a disk. This first volume, though, concentrates on essential Workbench duties like formatting a disk and copying files. It also takes a detailed look at what all the menu options do. There is plenty of useful information for beginners and you don't have much to lose, bar a stamp and a disk. As a special offer to AS readers, mention this review and you will also get a free F1 catalogue disk and a free beginners booklet.

Verdict: 90% **Star buy**

PD submissions

If you have some exciting PD disks that you would like to be considered for review in Domain Choice, send them in to Amiga Shopper, Future Publishing, 30 Monmouth Street, Bath BA1 2BW, clearly marked as a PD submission. We welcome any type of disk, except games.

If you are a PD house, make sure you include all the information necessary, such as how to contact you, how much the disks cost and how people can pay. If you are the author of the program, state where people can get your program from, and whether you would like us to consider it for inclusion on a future ShopperChoice Coverdisk.

Information about new PD houses or PD authors is accepted for inclusion in the PD directory (see box on page 43 for further details).



Sound and Animation Station's Object Editor works a treat and its Music Editor is fun and easy to use.

If you could load a brush or Anim Brush into this editor it would make using it a lot more fun.

LicencewareChoice

Sound and Animation Station

This two-disk set looks splendid and is quite interesting. It allows you to create little animation sequences. First off, you have to load in a picture for a background (example pictures are supplied on the data disk), then you must nip into the 'Frame Designer' where you can create animations.

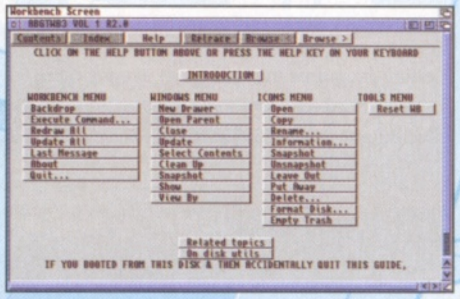
Once you have a background picture and some animations drawn you will want to top it off with some music. The Music Editor is easily the best and most fun part of the package. It has a selection of built in samples and you can easily create good tunes by clicking on the musical scale to create a simplified form of sheet music.

Once your creation is complete you can see it all running together by clicking on 'play'. This is where the whole package disappoints. The only thing you can do with your saved creation is load it back into Animation Station! I was expecting an executable stand-alone file or a least a player that would allow you to incorporate the animations on your own disks.

You are left to your own devices on most screens and the help screen is back on the main menu which means a lot of flipping back and forth, also a 'brush' or 'load DPaint Anim brush' option would have been welcome.

What this means is you have to use the supplied tools in the package to draw your animations from scratch or use the supplied animations. There are some rather good tools though, like Mirror, Flip, Rotate and Copy. The non-standard file requester only accepts DF0: which is weird and annoying and the finished animations are pretty jerky on a standard A1200, although they run perfectly on a A1200 with Fast RAM.

Despite its problems, the presentation of the program is top notch and lot of youngsters will have fun with it, for a while at least. Animation Station would have had more appeal if it was easier to create animations of your own and if it had a standalone player. I really wanted to recommend this program since the concept is



Still getting to grips with your A1200? Maybe the Absolute Beginners disk can help.

Roll up, roll up for the Big top Fun main menu (right); Word Balance (below), he will drop it if you get it wrong; and Seal-A-Grams game (below right).







good, but because of its glitches I have serious doubts about its longevity. Perhaps the next version will do better?

Verdict: 82%

Guide To Blitz

These two Blitz disks are meant to replace or complement the manual that comes with the Blitz programming language. The main AmigaGuide documentation is huge and comes out at a staggering 600K of text. Every Blitz command is covered including a lot of the commands of the PD extensions that were available at the time of writing – around December 95/January 96.

Disk two is no slouch either, with example programs and snippets of example code of virtually every command covered in the main guide. There is also some useful source code, as well as example code for a platform and a shoot-em-up game, and a drawer full of miscellaneous source.

The whole task of writing these disks must have taken a lot of time and it is a job very well done. The only gripe I can find is that the AmigaGuide docs could have done with more cross referencing.

Guide To Blitz is a good alternative to the new Blitz V2.1 manual, which is slightly spartan compared to the original Blitz manuals, and should help out a lot of beginners by giving example code and an alternative explanation of each command.

Verdict: 90% **Star buy**

Big Top Fun

This disk contains a set of four educational programs set in a circus. On booting the disk you are presented with a colourful flashing screen and some fairground type music which adds atmosphere. On this option screen you can chose which of the four games, known as 'acts' that you wish to play.

Word Balance involves a juggler on a unicycle who presents a word to match with a picture.

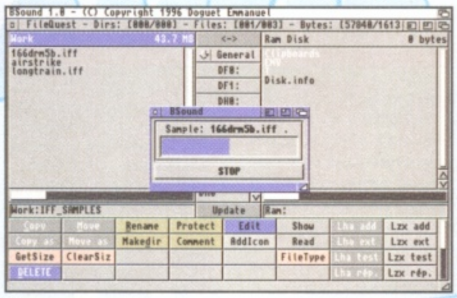
MatchPlay is a better game and simply involves turning over cards one at a time and trying to match the pairs. Each card has a picture with accompanying text, so there is a real chance of your child learning something with this game.

Seal-A-Grams. In this game the child has to re-arrange letters to form a word. The letters are on balls which, in turn, are balanced on the seal's noses.

Balloon Burst may be more fun for older children. A clown is badly animated across the screen and the child has to click the mouse at the correct time to make the clown shoot a balloon which contains the letters of a word to describe a picture.

Although there may be some fun and learning to be had from Big Top Fun, it is a bit dated compared to some of the other quality educational software around.

Verdict: 61%



Playing samples, mods and displaying pictures and text are but a click away using File Quest.

InternetChoice

FileQuest

FileQuest, put simply, is a Directory Opus 4 clone (forget Dopus 5 – yuk!) And it's excellent. FileQuest claims to be faster than Dopus4 and takes up a lot less memory, which just happens to be the two things I most disliked about Dopus, so I was eager to have a bash at this new upstart.

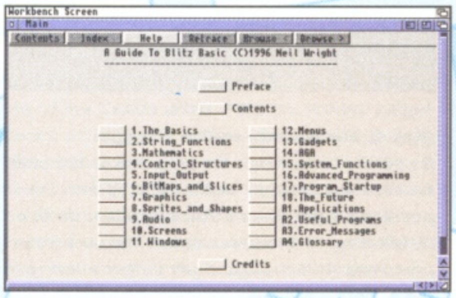
Installation is simple – copy the FileQuest drawer to your hard drive and add an assign to your 'User-Startup' so FileQuest knows where to find the config file. There is no installer supplied, so a simple script may have been helpful for beginners. But is it as configurable as Dopus? Nothing serious has been left out. You can create buttons to link to programs, you can set up filetypes and change the look and feel of the 'BGUI' interface in every way.

FileQuest is good even when using just the default configuration. It has Lha and Lzx buttons built in, it can read most file types by being linked to 'Multiview', plays mods and samples, displays virtually every picture format you could want, and so on. Documentation is brief, but useful, and it has a great configuration editor. All this for free! Well, it's Shareware, but there are no crippled features – all you get is a requester occasionally to remind you it is Shareware, which of course you should register in order to encourage quality products like this.

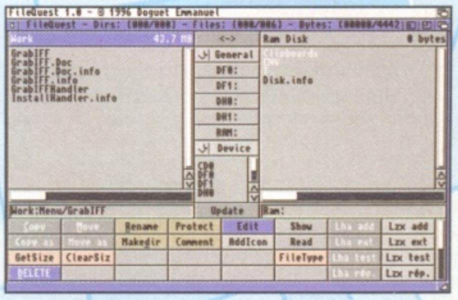
Verdict: 95% **Star buy**

HTMLess V1.1

HTMLess is a utility that converts HTML files (Web pages) into a readable text format. If your



Guide To Blitz is a massive reference work for Blitz Basic Programmers.



File Quest's – a Directory Opus 4 clone – is a welcome and excellent program.

Web Browser can't save Web pages as an ASCII file, then HTMLess could be very useful. HTMLess is fast, written in Assembler, and is small at only 8888 bytes, so can be run from CLI (with parameters) or from Workbench.

Other good features of this neat little utility is that it can keep any WWW addresses in the output text, a handy option. To top it off, HTMLess is easy to use. You just use a file requester to select a HTML file to convert, then use the file requester again to save the processed ASCII file.

Out of 50-odd Web pages I tried out on HTMLess, it failed and crashed my Amiga on one of them – not bad, but there is a bug in there somewhere. Also, it would have been good to be able to convert batches of files in one go rather than one at a time by hand.

Verdict: 85%

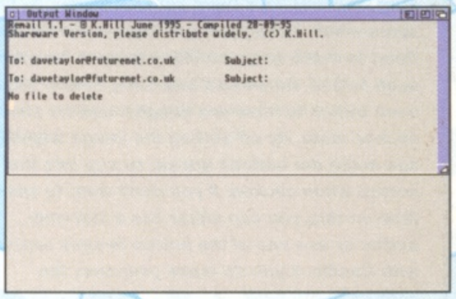
Remail V1.1

Remail is a handy E-mail utility that allows you to quickly edit E-mail messages that are waiting in 'UUspool' ready to be sent next time you log onto the Net. All you have to do to install Remail is copy the program to 'sys:c/' or the 'bin' drawer of AmiTcp.

When you next change your mind about an E-mail waiting to be sent, or if you just want to edit it further, then type 'Remail' in the shell to get a list of mailings waiting to go. To edit a message just type in a keyword from the E-mail message, for example 'Remail Taylor' if you were trying to edit an E-mail waiting to go to Dave Taylor. MeMacs is run for you and loads in the E-mail ready for editing/deleting/saving.

I hate using MeMacs so I renamed my original MeMacs to 'MeMacs_old' and then renamed a copy of 'Ed' to 'MeMacs' which worked. That aside, it's a good little utility.

Verdict: 88%



Here Remail listing the E-mail messages I am about to send to a well known celebrity.

CanDo Part 2

Part One showed you the first stages of creating a multimedia database, and now in Part Two **John Kennedy** *helps you build up your program by adapting buttons to suit the way you work*

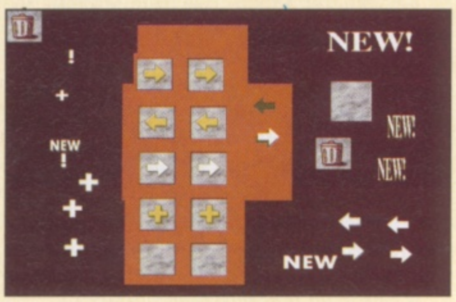


If you remember, we are creating a multimedia database: a database which will contain names and addresses, as well as sound samples and images. The aim is to make the database both as attractive and as easy to use as possible. In the first tutorial, we saw how to create a new deck and use a pre-defined graphic as a backdrop. We ended by creating a new button and assigning a simple action – it made a noise when we clicked on it.

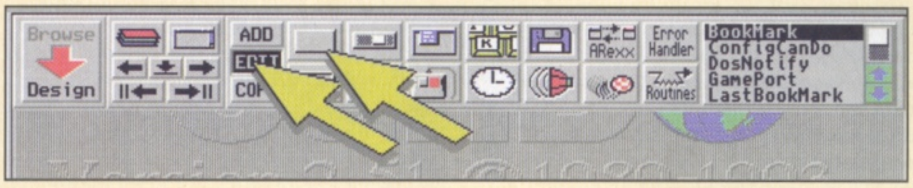
We shall carry on from this point, and start to add a little functionality to the program. Before we get stuck in, it's only fair to point out that the creation of the database itself is handled very nicely by CanDo itself. CanDo will look after the 'records' which make up the database with only a little work on our part. In case you're not acquainted with database terminology (and you don't need to be an expert, honest!) think of a 'record' as being like a single piece of paper in a filing cabinet. The filing cabinet is the database as it holds all the individual records. Each record can contain several 'fields': for example, the name of a person, and their address. Each of these pieces of information is called a 'field'. With the database management lecture out of the way, we can start to build our CanDo program. ■



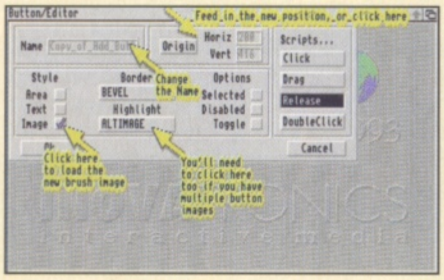
Making more buttons…



***Step 1:** To add new features to last month's Deck, we need at least another four buttons to provide a way to exit the program, move to a previous record, move to the next record and to add a new, blank record. Using your favourite paint package, create new buttons for these purposes and save them as IFF brushes. In the screenshot above you'll see I've used Personal Paint to make snazzy looking images: two for each button. As we saw last time, CanDo allows each button to have two images: one for each clicked state. By off-setting the image slightly, I can make the buttons appear to pop into the screen when clicked. If you don't want to spend time on this, you can either use a text-only button or use one of the button images supplied with CanDo. If you do make your own, the colours in the button brush must be the same as the colours in the background image.*



***Step 2:** The easiest way to add the new buttons is to copy the existing button. From the control panel, EDIT is selected and then click on the button gadget. Then select 'COPY OF' and you'll see a new Button window appear.*



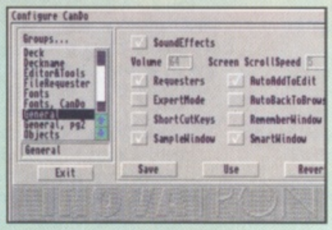
***Step 3:** Edit the new button settings. Remember to change the graphics to the new brushes you created, and also to update the position on the screen. You can either do this by entering co-ordinates or use the on-screen crosshair. At this stage don't bother altering the scripts – the buttons should inherit the sound effect and that's all.*



***Step 4:** Repeat these operations to add the new buttons. Space them out neatly (entering the co-ordinates by hand makes this an easier task) and use BROWSE mode to make sure they all click nicely. I've still got the last button to add in this screenshot. By the way, if you can think of a better icon for 'ADD' or 'NEW' please let me know!*

Configuring CanDo

The default operations of CanDo can be altered to suit the way you want to work. To adjust the settings, use the 'Configure Cando' option from the scrolling list on the far right of the screen. You'll see a new window appear: on the left is the list of the type of feature you can change, and on the right are the settings. You can, for example, change the default appearance of buttons, fields and documents if you click on the BORDERS option. You can also switch on and off the sound



Adapting CanDo's operations to suit the way you work is easily done with a few commands.

effects, and speed up the scrolling of the control panel. If you select 'Expert Mode' you can stop the helpful (but eventually irritating) requesters from popping up. Flicker fans will enjoy the option to use an Interlaced display.

Finally, here is a fun tip for you. Using a paint program, draw an arrow at around 16 pixels wide, and save it as a brush. Now, in the main card's 'After Detachment' script, add the command:

`SetPointer '(path and filename of your brush)'`

and when you run the deck after saving it, you'll find the normal pointer has been replaced with your brush. You can included two numbers after the command to define the pointer's 'Hot spot'. For example:

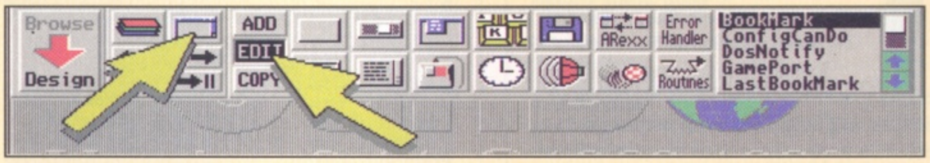
`SetPointer 'ram:brush.iff', 2,2`

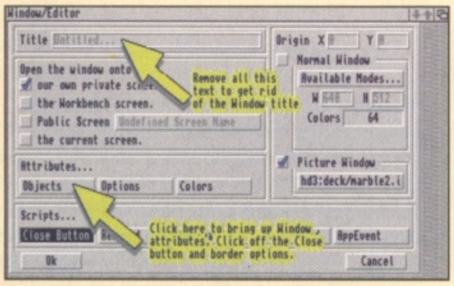
If you are creating a keyboard controlled program only, and want to switch the pointer on and off, use the command Pointer, like this:

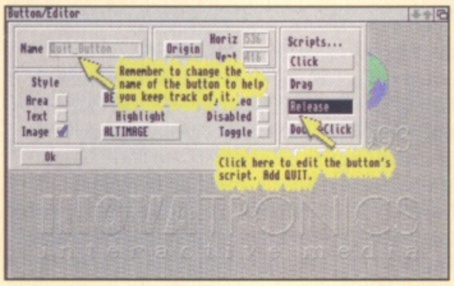
`Pointer On` **or** `Pointer Off`

Making even more buttons (2)...

Step 5: *The close gadget in the top left hand corner of the screen is mildly irritating. The screen also has a border around the image which tends to lessen the effect of the marble texture. We can solve both these problems by editing the attributes of the screen.*





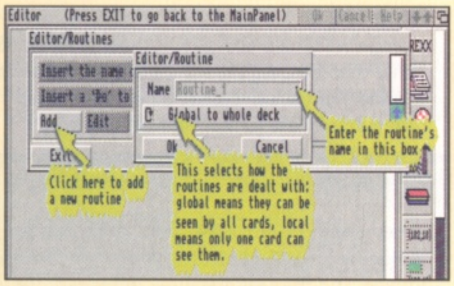


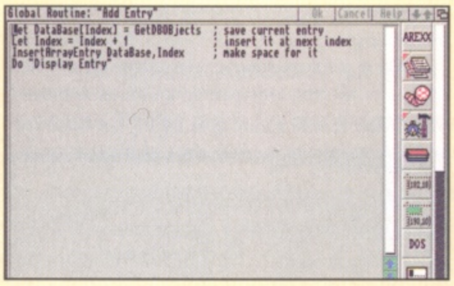


Step 6: *Now you'll see a display like this. First of all, delete all the text in the box which says 'Untitled...' This will remove the title from the top of the screen. Next, click in Attributes...Objects and turn off the Close Gadget and the Borders. When you return to the main display (and then re-select the current card) you'll see the differences at once.*

Step 7: *Now we have removed the Close Gadget, how can we quit our program? No problem: edit the script for the EXIT button which we created earlier. After the sound effect, add the command Quit. Now, when you use the Deck in standalone format, clicking on the EXIT button will exit the program.*

Step 8: *It's time to start adding some of the Database commands. We'll make the buttons do something (other than make a noise) by making them call suitable sub-routines. Sub-routines are scripts which float around inside the CanDo system until they are called. They aren't permanently attached to anything.*







Step 8a: *Click on the 'Routines' button and you'll see the editor. Now get ready, for you'll have to start some serious typing!*

Step 9: *You'll need to enter a few routines using this editor. I could be cruel and list them all, but you'll find that the listing are already on one of the CanDo disks. Find the drawer called Decks. Inside you'll find another drawer called 'More Examples', and inside that you'll find a deck called 'DBBase Deck'. Load it, and look at the Routines window. You can look at each Routine's script in turn, and save it out to RAM disk. You can then re-load them into your own Deck and save a lot of typing!*

Step 10: *When you have finished all that loading and saving you'll be ready for next month, when we assign the routines to the buttons and start to add some fields to the database.*

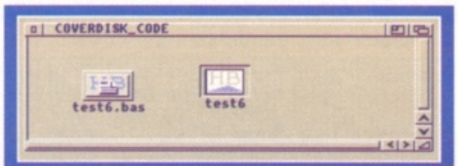
HiSoft BASIC2

*More help once again from **Paul Overaa** with HiSoft Basic 2's Amiga O/S links and this month a step-by-step guide to creating Gadtool gadgets finally comes under the spotlight...*

This month's tutorial has but one aim – to explain the overall steps associated with the creation of Gadtool gadgets. The main function used, CreateGadgetA&(), requires a data block known as NewGadget structure, and so the first step in gadget creation is to allocate one of these structures and store some suitable values in it. The names and offset values for the NewGadget fields are defined in the HiSoft gadtools.bc file and essentially they represent a structure that has this type of arrangement:

```
struct NewGadget
    2 Byte      ng_LeftEdge%
    2 Byte      ng_TopEdge%
    2 Byte      ng_Width%
    2 Byte      ng_Height%
    4 Byte      ng_GadgetText%
    4 Byte      ng_TextAttr%
    2 Byte      ng_GadgetID%
    2 Byte      ng_Flags%
    4 Byte      ng_VisualInfo%
    4 Byte      ng_UserData%
```

The purposes of many fields are straightforward – for example, ng_Width% and ng_Height% are used to specify the width and height of a gadget, ng_LeftEdge% and ng_TopEdge% represent the co-ordinates of the top left corner of the gadget and are used to fix its position in a window. The ng_VisualInfo% field is particularly important – Gadtools needs to know about various characteristics of the screen in which



You'll find both the source code and runable version of the example on the cover disk.

the window opens and this information is obtained by making a call to a function called GetVisualInfoA&(). The returned value (actually a pointer to a private Gadtool VisualInfo data structure) has to be stored in the NewGadget structure's ng_VisualInfo% field before the NewGadget structure is used. Before a program terminates, incidentally, the allocated VisualInfo structure needs to be released and this is achieved by using the Gadtool's FreeVisuallInfo() function.

Structure Allocation And Initialisation

The gadtools.bc h file contains the size of a NewGadget structure as a constant called NewGadget_sizeof%, so one easy way to allocate a NewGadget structure is to use a DIM statement like this:

```
DIM ng (NewGadget_sizeof%\2)
```

Why divide the structure size by 2? It's because the DIM statement is allocating an integer array, with each element being two bytes in size, whereas all of the offsets and size values in the header files are expressed in terms of byte values. If we didn't divide by 2 we'd end up with a structure twice the size we need. This is OK for the above allocation, but similar ideas have also been used in examples provided with the HiSoft Basic 2 package. Values have been placed into structures using statements like:

```
ng (ng_LeftEdge%\2) =215
```

The important thing to understand about this method is that it only works when you are storing, and intending to store, 2 byte (ie a word sized) values into a NewGadget structure. But if you wanted to store a long word (4 byte) value into the field called ng_UserData% you'd need to revert to the structure access approach that I mentioned in the very first instalment of the series. In other words – find the base address of the NewGadget structure, add the appropriate offset for the field in which you are storing data, and then poke the value to be stored using a POKEL statement. For instance:

```
POKEL VARPTR(ng(0))+ng_UserData%,
SOMEVALUE
```

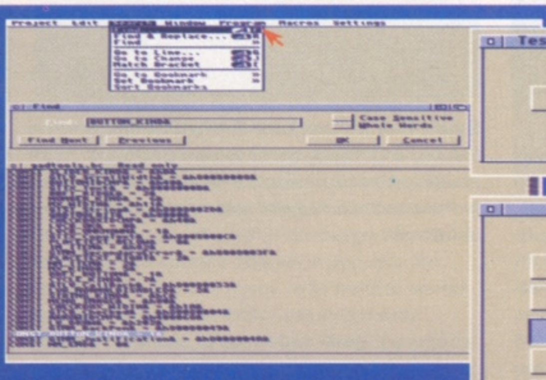
Of course, for the equivalent word (2 byte) storage we would use a POKEW statement. So, rather than dividing the ng_LeftEdge% offset by 2 in the expression mentioned earlier, I could have set the field to the value 215 using:

```
POKEW VARPTR(ng(0))+ng_LeftEdge%, 215
```

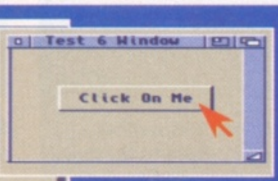
When placing word values into structures, the 'divide by 2' method does make the code easier to read. But the fact that most Amiga system structures have a variety of field sizes means that both POKE and 'divide by 2' invariably need to be used and, in the case of the examples which come with the HiSoft 2 package, this has caused confusion with some users. Because of this, I'm going to usejust one approach to structure initialisation (the POKEing method)!

Gadget Creation

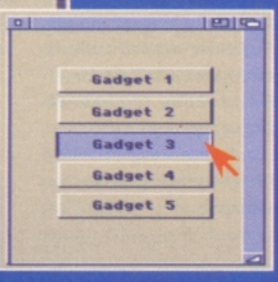
Creating a single gadget involves inserting suitable values for position, size, etc., into the NewGadget structure like this:



Above: Get into the habit of using HiSoft Basic 2's editor to view and search the header and constant files provided with the package.



Left: The BUTTON_KIND gadget produced by this month's example code.



Left: Sets of identical gadgets like this can be produced just by wrapping some loop code around CreateGadget A&() function!

Gadgets catered for

BUTTON_KIND&
These are simple Boolean gadgets used for things such as OK and Cancel buttons in requesters. When a user hits one of these types of buttons the application is sent an IDCMP_GADGETUP& message.

STRING_KIND&
String_kind& are used for entering text and are basically Intuition string gadgets. There is a tag called GTST_String& which can be used to specify a pointer to the default text used when the gadget is first drawn and a GTST_MaxChars& tag which specifies the maximum number of characters the string gadget should hold. Again, when a user hits one of these types of gadgets the application is sent an IDCMP_GADGETUP& message.

INTEGER_KIND&
Gadgets used for collecting numbers and two useful tags you'll find that relate to these gadgets are GTIN_Number&, which is used to specify a default number, and GTIN_MaxChars& which specifies the maximum number of digits the gadget is allowed to hold. IDCMP_GADGETUP& messages are again sent when such gadgets are used.

CHECKBOX_KIND&
IDCMP_GADGETUP& message generating toggle select gadgets used for presenting options that are either on or off.

MX_KIND&
Mutually exclusive radio button gadgets which generate IDCMP_GADGETDOWN& messages.

CYCLE_KIND&
Cycle gadgets are also used to provide mutually exclusive options but in this case only the current choice is displayed so the display is more compact. Whenever these gadgets are used Gadtools will send IDCMP_GADGETUP& messages.

SLIDER_KIND&
Sliders are proportional gadgets used to set levels – eg, a music program might use a slider gadget to adjust playing volume. Scroller gadgets (SCROLLER_KIND&) are a bit like slider gadgets but are used for adjusting the position of a limited view into a larger area. Listview gadgets (LISTVIEW_KIND&) are for scrolling list displays. Display only numeric (NUMERIC_KIND&) and string (STRING_KIND&) and palette gadgets (PALETTE_KIND&) are also catered for.

```
POKEW VARPTR(ng(0))+ng_Width%, 35
POKEW VARPTR(ng(0))+ng_LeftEdge%, 215
POKEW VARPTR(ng(0))+ng_TopEdge%, 20
POKEW VARPTR(ng(0))+ng_GadgetID%, 1
```

and calling the CreateGadgetA&() function. You'll see from the function box outs that a gadget type needs to be specified and this is done by specifying one of the types specified in the gadtools.bc file. You'll find details of the basic gadgets that Gadtools caters for in the accompanying box out (boxout1). For simplicity this month's example is creating just a single BUTTON_KIND gadget like this:

```
gadget_p&=CreateGadgetA&(BUTTON_
KIND,gadget_p&,VARPTR(ng(0)),_TAG_END)
```

Gadget creation however is not just a matter of calling the CreateGadgetA(&) function. Several other steps need to be carried as well: first, Gadtools needs to store a number of private data items relating to the gadgets placed in a window and it stores this 'context' information in a dummy gadget which actually forms the start of a Gadtools gadget list. Because of this a call to a CreateContext&() function needs to be made before any real Gadtool gadgets are created. Second, once a window is open it is also necessary to make a call to a GT_RefreshWindow() function. The last step concerns window closing. After this has been done all gadgets created using the CreateGadgetA&() routine need to be freed. Since Gadtool gadgets are automatically linked together this step involves just one call, to a FreeGadgets() function, no matter how many gadgets are involved.

Event Collection

There's good news in this area because very little change needs to be made to the code I presented last month. Providing we set an additional IDCMP_GADGETUP& flag in the WA_IDCMP& tag data when opening the window Intuition will send our program IDCMP_GADGETUP& messages whenever a user selects the BUTTON_KIND gadget. All we have to do in the event handling loop is check for these additional messages and do something. For this month I've kept things dead simple in this respect. Whenever an IDCMP_GADGETUP& message arrives I just call an Intuition DisplayBeep() function:

```
IF g_class&=IDCMP_GADGETUP& THEN
CALL DisplayBeep(NULL&)
```

All that happens then, when the user hits my gadget, is that the screen flashes. OK, so this month's example is no big deal as far gadget displays go – but the important thing is that the framework I've discussed is pretty much the same whether you are creating one gadget or a hundred gadgets.

Intuition functions

Intuition Function: CreateGadgetA&()
Description:
The Gadtool gadget creation routine
Call Format: g_p&=CreateGadgetA&(type&, prev_p&, new_p&, tag_p&);
Arguments:

type&	gadget type
prev_p&	pointer to previous gadget
new_p&	pointer to a NewGadget structure
tag_p&	pointer to a tag list

Return Value:

g_p&	pointer to new gadget (NULL if routine fails)

Intuition Function: FreeGadgets()
Description:
The Gadtool gadget freeing routine
Call Format:
CALL FreeGadgets(gadget_list_p&);
Arguments:

gadget_list_p&	pointer to list of gadgets

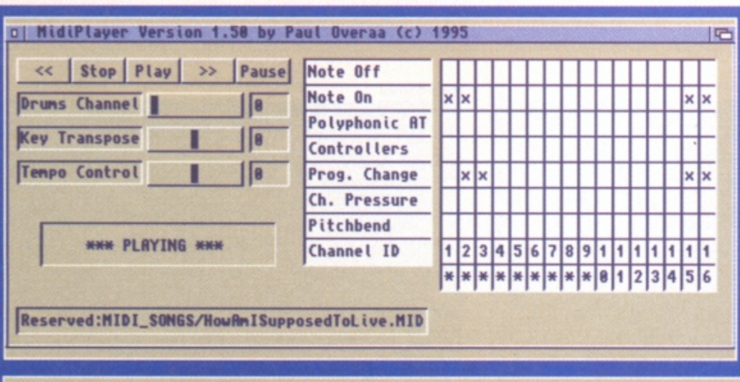
Return Value: none

Intuition Function: CreateContext&()
Description:
The Gadtool gadget context creation routine
Call Format:
gadget_p&=CreateContext&(glist_p&);
Arguments:

glist_p&	a pointer to a NULL initialised location chosen to hold the returned context gadget pointer. This then becomes a 'first gadget in the gadget list' pointer.

Return Value:

gadget_p&	initially a pointer to the context gadget (or NULL if routine fails). By setting this pointer to the return value of subsequent calls to CreateGadgetA&() it becomes a 'previous gadget' pointer.



More complicated Gadtool displays make it necessary to check gadget identification fields in order to tell which gadget is being used.



Gadtools also provides easy menu creation facilities. These are on the agenda for next month.

The Coverdisk Code

An awful lot of this month's example code (test6.bas) will be familiar from the program provided last month. This should make it relatively easy to appreciate the additional gadget related code that I've discussed. Of course, there is still an awful lot more to Gadtools and Gadtool gadget handling than I've been able to cover this month. When you start creating whole sets of gadgets, for example, it becomes necessary to start checking the ng_GadgetID% fields in order to tell which gadget caused the Intuition event to be generated. Needless to say, I didn't need to do this month because only one gadget was in use. For details on these fairly minor complications, plus details of Gadtool menu creation and use, I'm afraid you'll have to wait until next month! ■

Sounds simple

Breaking down a song into small building blocks makes producing your own music relatively simple. **John Kennedy** *tells you all about trackers and sequencers and gets your song moving along smoothly...*

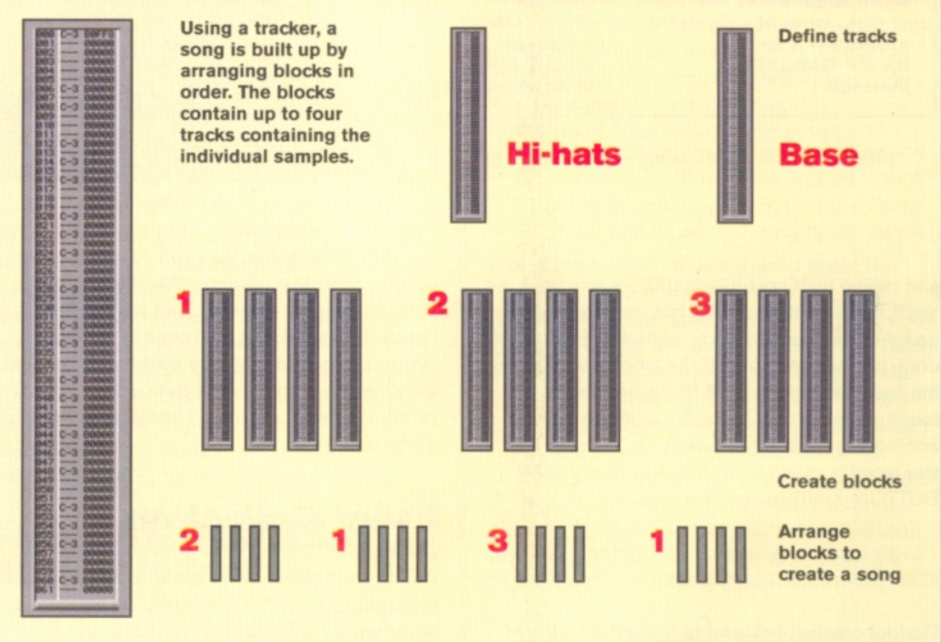
When you listen to a 'pop' song, you can quickly pick out the pattern of chorus and verse sections. You know the way it goes, it's usually something like: 'intro, verse, verse, chorus, verse, bridge, chorus, fade out ending'. Practically all modern dance music has gone beyond this rather dull Euro-pop pattern (or at least cleverly disguises it), and instead alternates between slowly building trance-like sections and percussion frenzies. Or something like that – you'll have to ask Darren to explain acid-funk techno jungle.

Anyway, the point is that every song has definite building blocks of sound. You'll hear the same sections again and again, although often they'll be combined in different ways to keep them fresh and happening (dude).

When you start using a sequencer to create your own music, you'll find using the computer opens up brand new ways or working. You can, of course, sit at a keyboard and try to play out every part of your song in one go. Remember that you now control everything from the percussion to the bass, to the keyboards and possibly even vocals. Using samples or MIDI instruments means that you can play any instrument you wish, so you could record the piano part, then the drums, then the strings and so on, complete take after complete take. This is very difficult, and requires a lot of planning. How many of us know what a finished song is going to sound like until we've finished it?

Moving to a section-by-section approach can work wonders. You can think of it as completing first the verse, and then the chorus if you are a Euro-pop fan, but it can be a lot more flexible. You can use the technique both using a tracker program or a MIDI sequencer. Let's look at a tracker first.

Building up the basis of a song

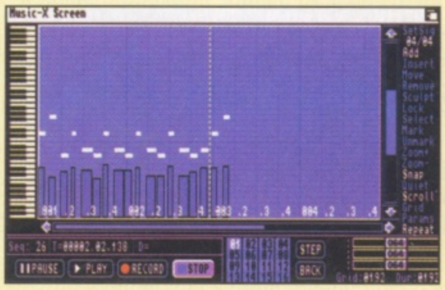


Making music with a MIDI sequencer

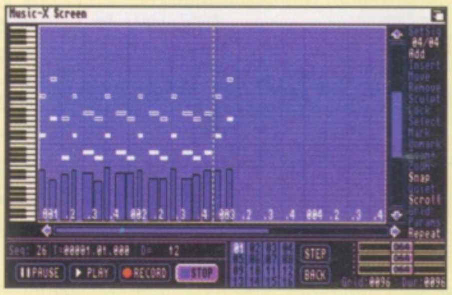
A MIDI sequencer like MusicX works in a broadly similar way to a tracker, in that many different tracks can be combined to make the finished song. When using MusicX with a multitimbral sound module, you should be able to achieve some excellent results with very little effort.

These kind of tricks take on a whole new meaning when you have a quality MIDI sound source to play with. Most can play 32 or 64 sounds at once, which means you can add layer onto layer to build up extremely rich soundscapes.

By defining blocks of sound in this way, you can make composing the finished song straightforward. Try following these four steps to see how creative you can be.



Step 1: *Create a sequence containing some notes, such as this simple repeating pattern, and make it about four bars long.*



Step 2: *Now copy the notes, move them up an octave and paste them down. Already the pattern sounds a lot more interesting.*

A sound tracker program such as OctaMed is quite rigid about how your music can be built up. A track/block/song approach is used, and depending on the tracker, four or more tracks can be played at once. The tracks are then arranged into blocks, and the blocks are shuffled around and re-ordered to make up the finished song. For example, it might work like this: you decide on the length of a track, and enter the notes or sounds to be triggered – you might start with a track containing hi-hat sounds and then make another with some bass/snare sounds. This gives you two tracks which you can then use over and over again. You might alter this track to create a bass/snare track which ends in a huge drum-roll. You then create another track – let's imagine it contains a bass synth sample. Next you create a track which triggers a swelling string sound, and finally you create a track with some vocal snatches. That's a lot of tracks so far, and we still have to arrange it into blocks, never mind songs.

The six tracks

1. Hi-hats
2. Normal kick/snare
3. Kick/Snare with drum roll
4. Bass synth riff
5. String sounds
6. Vocal snatches.

Now we can start to create blocks: these are collections of tracks which will play at once. How you arrange your tracks is up to you, of course, and you can have a lot of fun altering the tracks to create different arrangements. Here is only one example of how you can create different blocks. I'm assuming a standard tracker which can play up to four tracks at once.

Block one: 1 – Hi-hats, 2 – Normal Kick/Snare
Block two: 1 – Hi-hats, 2 –Normal Kick/Snare, 3 – String sounds
Block three: 1 – Hi-hats, 2 – Kick/Snare with drum roll, 3 – String sounds
Block four: 1 – Hi-hats, 2 – Normal Kick/Snare, 3 – String sounds, 4 – Bass synth riff
Block five: 1 – Hi-hats, 2 – Normal Kick/Snare, 3 – Bass synth riff, 6 – Vocal snatches.

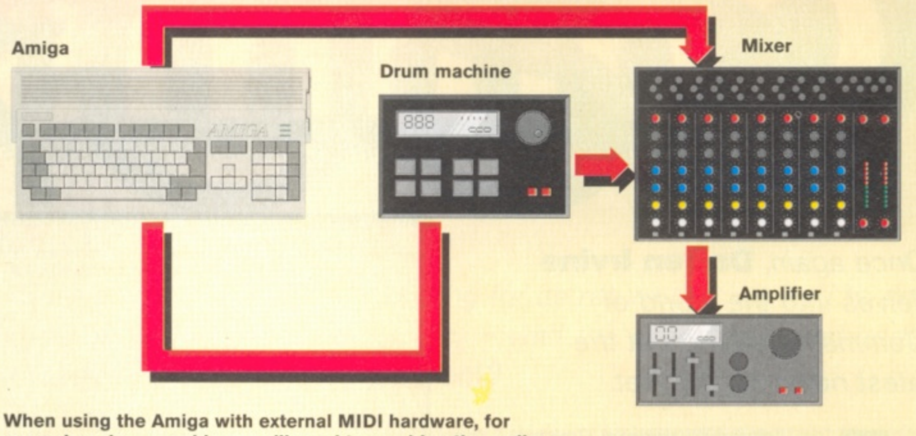
Now we can arrange the blocks in order to create a song. Remember, there is nothing to prevent you from repeating the blocks as you see fit. Here is one arrangement:

Block one, Block two, Block two, Block three, Block four, Block four, Block three, Block five, Block five, Block two, Block two.

And so we have a tune! Obviously, by arranging the blocks in a different order you end up with a totally different tune.

> "By arranging the blocks in a different order you end up with a **totally** different tune."

How to set up your hardware



When using the Amiga with external MIDI hardware, for example a drum machine, you'll need to combine the audio outputs as well as connect them via a MIDI interface.

Using other hardware

OctaMed can drive external musical hardware by means of its MIDI interface. MIDI is the electronic communication standard which is used to trigger notes and select voices, but it can also be used to send timing information by means of the special 'MIDI clock' timecodes. A MIDI system can either generate its own time signals, or work from an external clock. This means there are two ways of using external MIDI hardware.

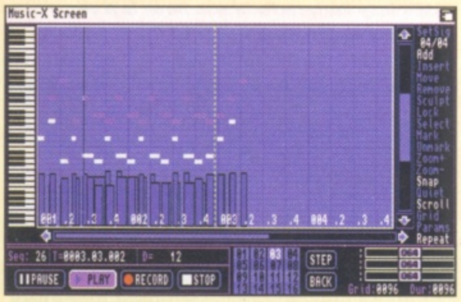
1. You may have a MIDI drum machine which has its own sequencer built in. You could therefore use the drum machine by itself to compose a killer percussion pattern, and use the drum machine's sequencer to store the entire song. Then, by setting the drum machine to accept external sync – that is, work with an external clock – you can connect it to your Amiga running an OctaMed module and know that both systems with be perfectly in time.

2. MIDI drum machines play a different drum sound depending on the note value they receive. For example, a Middle C may trigger a kick drum, and a D may trigger a snare. You can therefore set up a track in the Amiga tracker program which transmits C and D notes to the drum machine. The result is a pattern which has no effect on the Amiga, but triggers sounds on the drum machine.

Which technique you use depends on how you like to work. Some people find the drum machine's sequencer easy to use, and are prepared to work around the problem of storing two sets of song data: the tracker module, and the percussion song stored in the drum machine. Incidentally, this doesn't only apply to drum machines. Many sound modules also have built-in sequencers and so you have the choice here too: trigger the notes from the Amiga tracker, or simply use the MIDI clock to keep the two systems in time.

Which ever you use, you will need a way of combining the sounds from the Amiga and the external instruments. You need some form of audio mixer, capable of combining the stereo output from the Amiga with the output of the instrument, and then passing the signal to the amplifier or tape recorder or whatever. Sadly this can be an expensive business, but we'll deal with recording another day.

See you next month, but until then – start making music! ■



Step 3: ***Then shift the new notes in time slightly, or even alter the channel so that they are played in a different voice.***



Step 4: ***The coloured bars aren't notes, but previously defined patterns. As you select which ones to play you can alter their timing or key.***

Comms Column

*Once again, **Darren Irvine** delves into the world of Comms, checking out the latest news on the Net.*

Along with general Comms-related news, this month I've looked at a couple of Amiga mail systems that are on the Net and which offer different answers to the question of how an E-mail system should work.

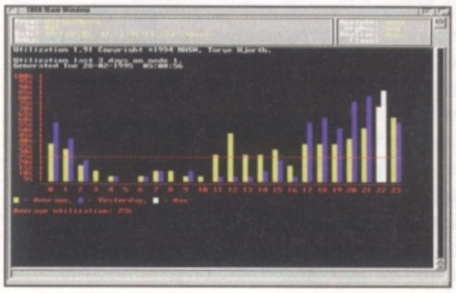
Thor Mail Systems

When Thor first appeared, I considered it to be a potentially useful system, although overly complicated and daunting to install. But the latest version is much neater – even the lengthy set-up process has been simplified. Thor is a mail system which can operate in many ways – as a BBS off-line reader, a Fido netmail and echomail system or even as an Internet mail reader and Usenet news reader. If an application relates to mail or news, then the chances are that Thor can be used for it.

In many ways Thor looks similar to a dedicated Fido system such as Spot, but it is much more flexible, and also has a slightly more multiple window look, with a floating control panel. If you use more than one sort of mail system already (Fido, Internet, and so on) then Thor may well be worth taking a look at to replace all of your existing mail software. If this sounds like the sort of thing you need (and you can face a still rather extensive set-up procedure), check out the Thor homepage at: http://www.cs.uit.no/~kjelli/thor.html



The Main Message window in Thor doesn't look like much at first, but it's logically organised.



In addition to plain text, Thor has excellent support for ANSI encoded mail messages.

Sale of AT



The main Amiga news in general this month is, of course, the sale of Amiga Technologies to VIScorp. The text of Petro Tyschtschenko's (pictured here) keynote address at the World of Amiga show in London on April 13th can be found on Amiga Technologies' Home Page: http://www.amiga.de/

Code for Portuguese!

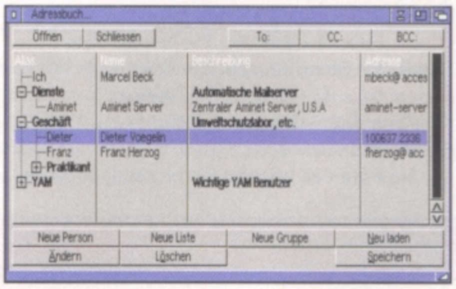
If you read Portuguese, and have an interest in writing HTML code on your Amiga, check out the WEP Pre-HTML processor at: http://wwwalu.ci.uminho.pt:8888/~si15603/wep/

With a bit of luck, they'll have a fully English version soon.

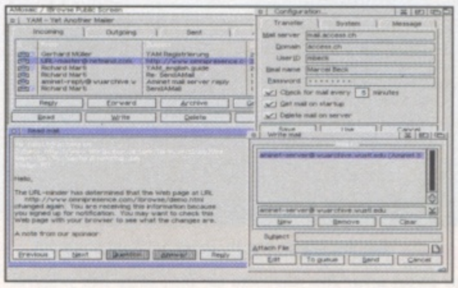
YAM Mail Systems

YAM is an abbreviation for Yet Another Mailer and, of course, that's what it is. It's a modular system with MIME (Multi-purpose Internet Mail Extensions – a form of message encoding) support for outgoing messages, and a selection of excellent add-ons such as a fully featured address book, and context-sensitive help bubbles. As well as MIME, YAM also has automatic support for UUencode/ UUdecode.

It's either an advantage or a disadvantage depending on your viewpoint, but YAM makes extensive use of MUI. To me, it's an advantage, because fonts and window size are all under your control, so YAM is extremely user friendly and smart looking. YAM also has a built-in POP3 client making it simple to install and get working alongside an existing Internet TCP/IP system. Support for incoming MIME messages should be available soon. Whether you prefer YAM to the already fully operational (MIME wise) MetaMail, is a matter of personal choice. More information about YAM and the ability to download the latest version can be found at: http://bitcom.ch/~mbeck



YAM's fully featured address book is a very useful feature to have.



YAM's multiple window layout looks fairly smart, and MIME support is good too.

Amiga Resources on the World Wide Web

Each month I'll point out a few interesting Amiga related sites on the Web. One extremely useful site is the Pure Amiga homepage. Pure Amiga has a lot of Amiga news and rumours, as well as software and hardware reviews and useful links to other sites. Their URL is: http://www.netlink.co.uk/users/PureAmiga

I'm sure that you're already familiar with Aminet, the extremely comprehensive collection of Amiga PD and shareware, but it can sometimes be tricky keeping track of new stuff that is added to the list, so I've decided to note here any new useful Comms related software that goes on-line.

This month, along with some obscure Fido ARexx stuff, the main Aminet news from as far as Comms is concerned is the latest (1.1) version of AWeb, along with AWeb documentation in PostScript format. The UK Aminet mirror can be found at: http://src.doc.ic.ac.uk/public/aminet

Another useful site with some Amiga Shareware available to download is the homepage of BevelStone in Denmark. Their URL is: http://www.login.dknet.dk/~bvlstone

AMOS Part 1

Welcome back to the AMOS column. So many readers wrote in asking for its return that we had to do something about it. **Steve Bye** *starts you off writing a complete utility – with the expert help and code written by* **Malcolm Lavery.** *Are you ready to write your own program?*

This new AMOS series will again be over a six month period, but this time we only have room for one page a month. I have been asked to put together a breakdown on writing a complete utility, so it is not going to be easy. The only way of doing this is to leave out explanations of the more obvious bits of code, or at least only give the straightforward bits a brief mention, so no letters of complaint there please.

The utility I have chosen to look at is a great little lottery predictor written by Malcolm Lavery. You may of heard of Mal – he has written a string of top PD/Licenceware titles including MagicPaint Box, Codename Nano and Teeny Weenys. For this series, Mal has done all the coding and I will do all the yapping. A lottery predictor program may not sound the most exciting of utilities to write about, but Mal's program is very well written and beginners will learn a lot from the routines we will look at.

Most of the code is in procedures that can be easily used in other programs. In fact, a lot of the procedures are from Mal's library of routines he has written and uses in many of his programs, and now you can too. The code covered this month is on the Coverdisk, so for clarity I advise you get AMOS up and running and load in the code while following this article.

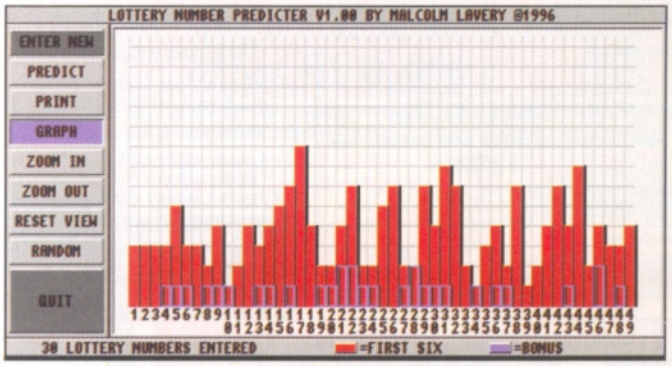
Luck of the draw

Right. Time to get on with it. The first part of the program sets up some simple variables for use later on. The next part, which is remmed as 'LOAD IN LOTTERY DATA' does just that, it loads in an AMOS bank which contains the numbers so far drawn in the lottery. This Abk file is used to save any new data typed in by the user and therefore must be loaded in at the start of the program.

As you will see from the code, bank 8 is reserved for the file, the next line checks that the file actually exists, if it does then it is loaded into bank 8. Whether the file was loaded into bank 8 or not a Poke$ inserts the string 'LOTTERY' at the start of the bank, which in effect creates our own custom data file.

The 'POS' variable is a marker so we know whereabouts in the bank we are looking at, to start with it is set to the beginning of the bank, Start(8). The next lines set up some more variables, but these are global variables which means they can be accessed inside as well as outside of procedures.

How the full program will look when it's finished.



Following procedures

The next part of the code calls the 'SETUP' procedure. This procedure actually just calls another procedure called '_Menu_Display' for reasons that will become apparent later. The first four lines of the 'Menu_Display' procedure opens a nice high res screen of 8 colours, sets up the palette display and then limits the mouse pointer so it can only be moved around the button parts of the screen. Lots of calls are then made to the '_3D_Display' this sets up the 3D look of the program.

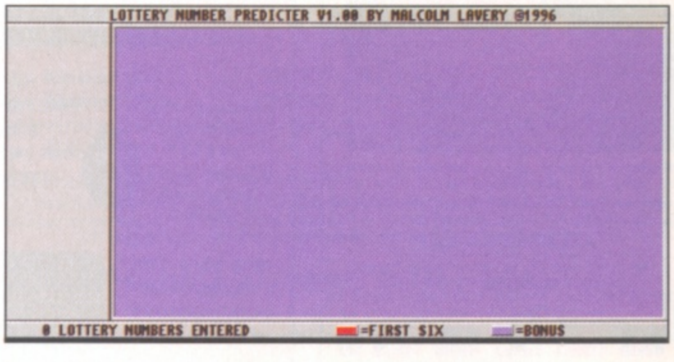
Mal's '_3D_Display' procedure may look complex, but it is a well written and flexible procedure that you would do well to keep available for use in future programs. It simply draws 3D boxes of any size anywhere on the screen. You can have an 'in' or 'out' looking box and you can '_FILL' it with any colour you want.

The proc takes six parameters. X and Y are the co-ordinates of the top left-hand corner of where you would like your 3D box to start. Width and height are the size you want the box in pixels, 'IN_OUT' can be set to either 0 or 1 (experiment) and '_FILL' has to be set to the ink colour you want your 3D box to be filled with.

Some info about how many lottery weeks are contained in the Lottery bank that we loaded earlier are then printed on the screen. This is calculated as 'MANY=Length(8)/7-1' where the variable 'MANY' will hold the amount of lottery weeks, this is arrived at by dividing the size of bank eight by 7 and then subtracting 1.

The last part of the '_Menu_Display' procedure renders Mal's 3D buttons to the screen. We will look at this next month. The screen is then faded in. The code covered so far is on this month's Coverdisk. In its current form you can run the code and you will see a bare bones version of the lottery screen, a mouse click will end the program. Be patient – we will have the program up and running soon. ■

This is what you will get if you run the code we have covered so far.



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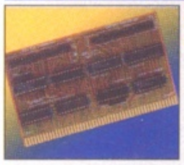
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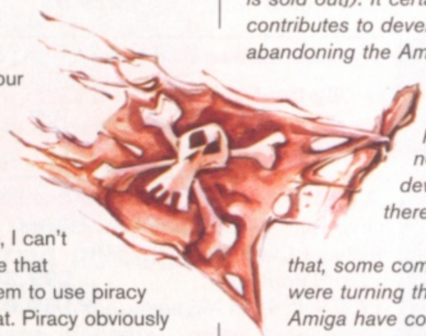
Are magazines more to blame than pirates?; Is Amiga Shopper rude and arrogant?; Is David a spaceman? AS readers once more ask the burning questions and tell it like it is.

This month's selection of letters shows the level of concern that Amiga owners have about the future of their machine. We can only hope VIScorp heeds their cries better than Escom.

Piracy point

£25 Winner

Firstly I must say that I naturally don't agree with the theft of software (aka piracy). When the Amiga is no more, I will always remember what kind and generous people you were, giving us that (nearly) free software on your Coverdisks each and every month.



During the Amiga's recent decline, I can't help but notice that magazines seem to use piracy as a scapegoat. Piracy obviously causes people to stop producing software. I mean, piracy is not exactly an incentive, is it?

Although looking at the situation through a consumer's eyes, why should we buy full price software when possibly in a few months, a high proportion of this software will be given away on Coverdisks? This would suggest that magazines are also helping pirates destroy the Amiga user base.

Unfortunately I feel the Amiga user is going to suffer yet more. W H Smith no longer seem to be stocking Amiga magazines. Electronics Boutique stock only a few games; not even your magazine includes many advertisers selling serious commercial software titles.

What realistic chance have AT got at the moment without software being readily available on the high street and Escom staff actually knowing how to promote (or even plug in for that matter) the Amiga? They have two hopes. Bob Hope and no hope.

Mark Chatworthy
Herstmonceux

Well, I don't think that magazines, or AS at least – I can't speak for others – cite piracy as the main cause of the Amiga's downturn in luck (see AS60 for a full feature on piracy [sadly no more back issues of AS60 are available as it is sold out]). It certainly contributes to developers abandoning the Amiga. If they can't sell an Amiga product, there's no point them developing it, is there?

Having said that, some companies who were turning their back on the Amiga have come to realise that a considerable market still exists. Team 17 for one. If you check out the games charts, you'll see that the Amiga still figures highly. As for commercial applications, the answer is different. The prices of top quality software in this market are considerably higher than for games and as they are easier to copy, it makes piracy a seductive option for Amiga users.

Whether magazines are partly responsible too is a good point, but one which has its advocates and its detractors.

Some companies believe that free software deters users from buying products, while others see it as an ideal way of getting more users to try – and buy – their software. More often than not, the Coverdisk programs are versions which have been updated and there is an offer for readers to get the latest version at a discounted price.

This helps the reader, who can see whether the program is right for them, and saves them money on getting the best version available. It helps the company by getting what is effectively a complete demo of their product to a wide audience.

Of course, this does then wear well with any competitors who see the program on the Coverdisk as giving someone an unfair advantage. This tends to be levelled out by sourcing programs from as many different places as possible – so that everyone gets a crack of the whip. Naturally, full programs on the disks don't do magazine sales any harm either, but it is exceptionally rare that a new program will appear complete on a disk within months of release. If users would rather wait years for a program to appear on a disk, then it's unlikely they were ever going to fork out for it full price.

As newsagents add to our problems by stopping stocking us, readers have two choices. They can place an order with the newsagent and reserve their copy or they can subscribe. Subscription has the advantages of saving money and getting the extra offers and, of course, the extra disk. Irregular readers, though, are stuck with the pot luck of whether a newsagent stocks the mag and whether they have any left.

As to AT's chances, it remains to be seen what they can achieve under the new VIScorp owner. Initial signs from people dealing with VIScorp have been very positive, much more so than under Escom. It appears they are working hard, and fast, and actually getting results. Read more about it in this month's news.

By the way Mark, you didn't send us your complete address, so if you want to claim your £25,

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AT contacts

If you want to contact Amiga Technologies, write to the following addresses:

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then please write in and let us know where to send it!

A change of tone?

First of all, congratulations David on becoming the new editor of Amiga Shopper. As far as I am concerned, your appointment could not come at a better time. Allow me to explain myself.

I have been a subscriber since issue 3 (seriously!), and have stuck with AS through the good and bad times. However, I was actually just about to write and cancel my subscription – so fed up had I become over the 'new look' AS. I found the style to be very aggressive, especially towards any readers who wrote in with anything other than glowing praise.

An example, if I may, would be a letter in issue 54 (I know it is nine months ago, but it was the first issue which came to hand right now) in which Mr Cornwall asks why AS does not follow in the footsteps of other Amiga magazines which had at that time started using PFS/AFS as the file system on their Coverdisks. What was the editor's (Ms Grant's) reply? Was it something reassuring such as "We have no plans to move away from the current filesystem"? No. It was the somewhat aggressive and downright rude "Er, which disks use PFS/AFS? None that we know of" – hardly the sort of way to treat someone who had taken the time to write in!

Sadly, this tone has been more and more prevalent in AS in recent months.

I noticed that you made mention of the 'relaunch' by Ms Grant of AS – would this be the relaunch which say the price rise by 58% overnight, and say the circulation drop by 50% more than it had in the previous six month period? Just wondered...

However, now that there has been a change in editor, I shall stick with AS for a while to see if it improves – I remember being in this sort of position a few years ago, and the then new editor (Baggers) made significant improvements and made the style much more friendly, and I hope the same will happen again.

Keith Blakemore-Noble
E-mail

Thanks for your words of support, but I have a confession to make. The response to the letter about AFS was actually penned by me. Sorry. I would have written a more detailed response, but space didn't permit, so maybe it came across as slightly more abrupt than intended. In which case, my apologies to Mr Cornwall as well.

The truth is that the AUI disks referred to were created by me and so I was in an ideal position to comment that they didn't use AFS at all; they used Diskspare which is a different system (with similar results, I admit).

As you went on to point out in your letter, though, (sorry, we had cut it down), we all make mistakes. But the relaunch I referred to was the one that saw a title that was in danger of being closed because of falling readership successfully survive for over another year by attracting new readers from a broader spectrum. It also saw AS record the lowest decline in readership among any Amiga magazines.

As I said in the Subscribers letter this month, AS has suffered a sad blow by the loss of a Coverdisk, but we had no choice. The decision was made (way above editor level) that the only way to remain open was to move this way. Every magazine in this sector is under pressure and feeling the squeeze. All we can do is provide the best coverage we can and the best software we can on the disk with the resources we can afford.

Some readers will doubtless decide to stop buying us, while others will continue to see AS as a worthwhile read offering three or four disks packed onto one, top quality reviews and roundups and expert advice. This is not meant to be an aggressive reply, but bear in mind that we are as frustrated by the Amiga's situation as you are.

Compo winners

We have not one, but two competitions to announce winners for this month. Firstly, there's ten lucky winners of our £1200 multimedia giveaway. Then, there's a winner from the Siamese System competition and the Surfer compo from the World of Amiga show. The ten lucky winners who each receive a copy of MMExperience, OctaMED 6 CD, Artworx CD, Pahse 3 CD, Nucleus, DMS and Disk System 3 are: T Richardson of Tadworth, M Moore of Ipswich, I Worrall of Barrow-in-Furness, W Betesta of Derby, G Freemantle of Fareham, C Meilicke of Bonn (Germany), G Clarke of Leeds, A Stevens of Redcar, J Eliassen of Sjøvegan (Sweden) and B Curran of Coupar Angus. Your prizes should be with you either already or very shortly.

M Bond of Tiptree was the lucky winner of the Amiga Surfer bundle which was given away in the WOA competition. well done to all of you.



Penpals request

Before I begin, I'd like to say I think your magazine is brilliant. I buy it almost every month and was especially pleased with AS62's CanDo giveaway.

When I was looking through the User Groups and PD Houses on the Coverdisk, an idea struck me – why not include a penpals section? I've already seen people looking for penpals in the Reader Ads so why not make a full section out of it? This way, we could all write to other Amiga users around the globe and send each other hints and tips, PD software and talk about our favourite computer.

Why don't you ask everyone out there who wants a penpal to send in their name and address and include them on next month's disk? Go on, do us all a favour! Surely, you have a few Ks spare on your excellent disks?

By the way, does anyone else find that whenever they look at the photo of David Taylor, they keep thinking he's in some kind of silver space suit? All he needs is a goldfish bowl on his head!

Alan Hennebery
7 Westcourt, Iralee,
Co.Kerry, Eire

Well, as you can see from this issue, Coverdisk space is at a premium and people can already find penpals in the Reader Ads section. However, if readers do want it added as a separate section on the disk, then it's certainly possible. Write in and tell us and if you include your details, please do so as a text file on a disk – I can't sit and type in all your addresses! Until then, Alan, I've included your address so that people can start writing to you.

And you're not the first person to ask whether it's a space suit. In fact, John Kennedy mentions it in every E-mail he sends me! It isn't. It's a rather tasty raw silk sweater that I still like and the picture is me modelling it in the Yorkshire Dales on holiday. So there!

Forgotten author

In your May edition, you made use of the AmiTCP installer for your DIY tutorial, but didn't credit the installer's author. Shame on you, especially as you do have the decency to credit Coverdisk contributors.

Kevin
E-mail

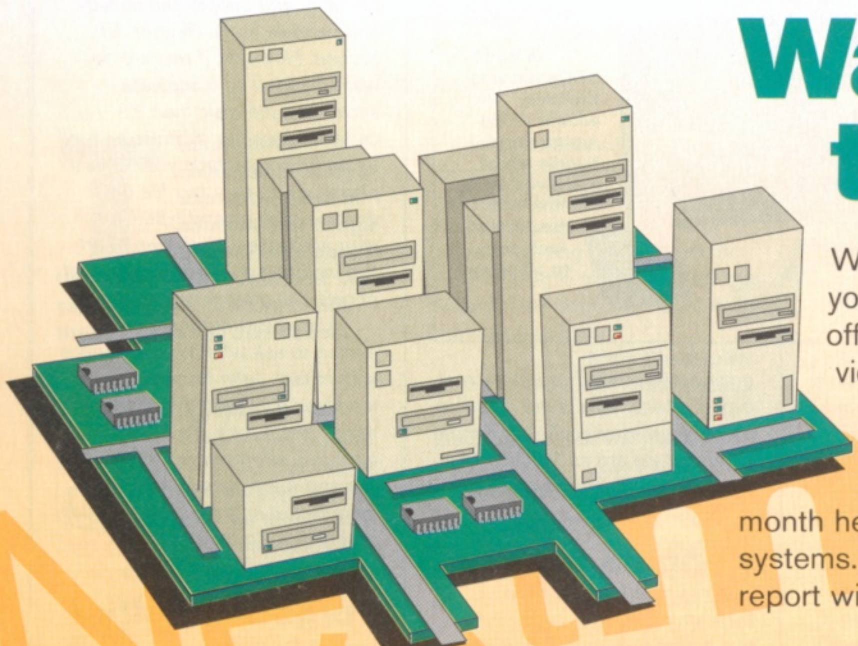
You're quite right. My apologies again. Thanks to CountB for the installer that makes it all so much easier as you could see from the piece. We do try to give credit where it's due, because it is important, but with so many products dealt with in so many different ways, some do slip through the net.

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Next **month**



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What benefits can an external tower system add to your A1200? There are now several systems that offer SCSI housing, additional IDE bays, Zorro slots, video slots... We wanted to know which ones offered the best expansion capabilities and which ones suited different users. So, we set John Kennedy on the case (if you'll excuse the pun) and next month he'll be presenting a full round-up of the available systems. If you are looking to expand your A1200, this report will be the one for you.

AMIGA SHOPPER

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Reviews

Well, release date changes caught us out last month, but we're going to put our neck on the line again and say that next month we'll have reviews of the Surfin' Squirrel, Photogenics 2, the Genius 1212HR graphics tablet and Infrarexx – the system that allows you to control infra red controlled systems with your Amiga! There's more, but let's not tempt fate by mentioning their hallowed names.

Why not take advantage of our special six-month subscription deal? Telephone the Subscription Hotline on ☎ 01225 822511.

Regulars

All the AS regulars will be in next month. As well as Answers and the Public Domain, there'll be the Comms column, the excellent Coverdisk and the How to... series. The tutorials continue with HiSoft BASIC, CanDo, Music and AMOS.



August issue **65.** On sale Tuesday, **25th June** 1996

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Aminet is the world´s largest collection of freely distributable Amiga software. Up to 10.000 users access the vast archives ervery day and countless programmers publish directly via Aminet. Until recently access to Aminet was restricted to international network users. With Aminet Set 1, consisting of 4 CDs, the complete archive is published the first time. This CD-ROM-collection, which is dated January 1995, offers an almost inexhaustible reservoir of top-value Shareware. A wide variety of programs is included: Applications, Games, Demos, Pictures, Mods, Animations, Developer-Material, ... It contains approximately 4 gigabytes of software in 12.500 archives and you will enjoy the comfortable user-interface. £29.95



Aminet 11

Still available! £14.95



The Light Works

Raytracing - A fascinating area of the computer graphics. Pictures from the computer, perfectly rendered, fascinate people all over the world. The Amiga was the first computer to be used for raytracing, and today it is still a leader, with many high quality programs. A real artist of raytracing is Tobias J. Richter from Cologne/Germany, whose detailed objects stun the people. Especially his space ships of famous science fiction films are used to demonstrate the capabilities of a raytracing program. The objects are highly detailed and extremly realistic due to the application of complex surface textures of the models. Until now it was difficult to acquire these objects in order to create ones own scenes or animations. £29.95



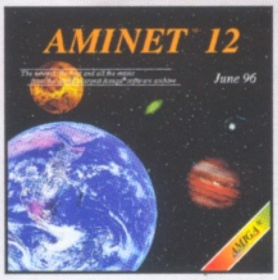
CD-Write

What!?! You still can't write to your CDs? CD-ROMs have long been an essential part of Amiga computing. Many users already own a CD-ROM drive, and the number of software packages available on CD is increasing steadily. Until now, though, it was not possible to write to CDs. We have solved this problem with our new revolutionary product: Ralph Babel and Stefan Ossowski's Schatztruhe are proud to present what can be considered a marvel of technology: CD-Write enables you to virtually write to CDs with an ordinary CD-ROM drive. From now on, you will be able to write, delete, and modify data on your CDs. This product will take you into a new era, and you will be able to utilize CD-ROM technology to its fullest. £44.95



Aminet Set 2

AMINET SET 2, dated November 1995, consists of approximately 4 gigabytes of software in 12.000 archives. Whether you like applications, games, communications or programming, the SET gives you all you need. Easy to use index files and search facilities make accessing it a pleasure. £34.95



Aminet 12

Aminet CD 12, dated June 1996, consists of approximately 1,1 gigabytes of software in 3800 archives. Since the release of Aminet CD 11 more than 710 MB new software has appeared. The current edition has a special focus on mods, more than 1000 music-modules from the internet were included. User friendly access software makes the Aminet CD 12 a pleasure to use. £14.95



NetNews Offline Vol. 1

NetNews Offline Vol. 1 is the first disk of a new bimonthly published series of Amiga CD-ROMs which contains all Amiga-related newsgroups from the internet. Every volume features about 50.000 articles which contain hot rumours, important information about all aspects of the Amiga, press-releases, discussions and flame wars, ... A newsreader is included. NetNews Offline is the cheap alternative of getting in touch with Usenet. £14.95



FreshFish 10

The FreshFish CD-ROM-series, produced directly by Fred Fish, provides Amiga users with hundreds of megabytes of the latest freely redistributable software. Published approximately every two months, each volume is a two CD set containing new submissions since the latest volume, as well as an ever growing selection of tools, libraries, documentation and other useful material that is updated with every release. £17.95



Gamers' Delight II

This CD contains 1070 games for the Commodore Amiga from differing categories. Action, Jump & Run, Card Games, Puzzles, Strategy Games - a whole range of computer entertainment awaits! Gamers' Delight will hold you captivated for hours and guarantees long-lasting pleasure. 70 games are commercial versions - no public domain & no demos! This CD can be run on any Amiga with CD-ROM drive,1 MB free memory and Joystick/Joypad. £26.95

All products are available in your local Amiga-shop or through national mail-order-companies

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